

Exhibit 190

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF RHODE ISLAND

DAVID HOWARD WESTFALL, IN HIS)
CAPACITY AS ADMINISTRATOR OF)
THE ESTATE OF THOMAS HOWARD)
WESTFALL AND IN HIS CAPACITY)
AS ADMINISTRATOR OF THE ESTATE)
OF BETTY E. WESTFALL,)

RECEIVED

JUN 9 1983

E.P.L.

vs.)

C.A. No. 79-0269

WITTACKER, CLARK & DANIELS,)
METROPOLITAN TALC COMPANY,)
INC., PFIZER, INC., WINDSOR)
MINERALS, INC., itself and)
as successor to EASTERN MAG-)
NESIUM TALC COMPANY, INC.,)
and OMYA, INC., itself and)
as successor to VERMONT TALC)
COMPANY, INC.)

DEPOSITION OF PETER N. GALE, taken on behalf of the Plain-
tiff, on April 26, 1983, in Oklahoma City, Oklahoma, before
Freddy D. Leggett, Shorthand Reporter and Notary Public for the
State of Oklahoma.

APPEARANCES

For the Plaintiff:

R. Daniel Prentiss
Attorney at Law
One Smith Hill
Providence, Rhode Island 02903

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EXHIBIT

JJ 436

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1 For the Defendant, Michael G. Sarli
Wittacker, Clark Attorney at Law
2 & Daniels: 2200 Fleet National Bank Building
Providence, Rhode Island 02903
3
4 For the Defendant, William A. Curran
Metropolitan Talc Attorney at Law
Company, Inc.: 1210 Turks Head Building
5 Providence, Rhode Island 02903
6 For the Defendant, Brian T. Kenner
Windsor Minerals, Inc.: Attorney at Law
7 600 Atlantic Avenue
Boston, Massachusetts 02210
8
9 For the Defendant, John F. Dolan
OMYA, Inc.: Attorney at Law
Suite 3A, 101 Dyer Street
10 Providence, Rhode Island 02903
11 For Peter N. Gale: Larry A. Morgan
Attorney at Law
12 Suite 314, 5700 North Portland
Oklahoma City, Oklahoma 73112
13
14 Also Present: Howard G. Sloane
Attorney at Law
15 80 Pine Street
New York, New York 10005
16
17
18
19
20
21
22
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S T I P U L A T I O N S

It is stipulated that the deposition of Peter N. Gale may be taken by subpoena.

It is stipulated that all objections to questions, except as to the form of the question, may be made at the time of trial when deposition is offered into evidence with the same force and effect as if objections were made at the time of the deposition.

It is further stipulated that all objections by one party defendant will also be the objections of all party defendants.

It is stipulated that the time of filing deposition may be waived.

* * * * *

MR. PRENTISS: This is a deposition being taken in the matter pending in the United States District Court for the District of Rhode Island entitled David Howard Westfall in his capacity as Administrator of the Estate of Thomas Westfall, et al. versus Whittacker, Clark & Daniels, et al. It's civil action number 79-0269.

The deposition is being taken pursuant to a subpoena duces tecum issued out of the United States District Court for the Western District of Oklahoma, served upon Mr. Peter Gale.

For the record, I'd like to state that earlier this morning pursuant to a motion in the alternative to quash that subpoena or for protective order filed by Mr. Gale through counsel, all parties that are present here appeared before Judge Russell

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1 of the U. S. District Court for the Western District of Oklahoma
2 and that pursuant--following conference in chambers, the Judge
3 issued a protective order and ordered that this deposition may
4 go forward.

5 I'd like to mark as Exhibit 1 to this deposition a copy
6 of the order that was entered by Judge Russell this morning.

7 I'd like to state also for the record that Judge Russell,
8 during the conference, ordered that Mr. Peter Sloane who repre-
9 sents Engelhard Corporation which is not a party to this action,
10 would be allowed to sit in in this deposition and to assert that
11 the documents on which I intend to question Mr. Gale and the
12 other areas of questioning that I have Mr. Gale are considered
13 by Engelhard to be confidential. Do you wish to add anything
14 to that, Mr. Sloane?

15 MR. SLOANE: I think just for simplicity and for
16 completeness as well, it's appropriate to read the very short
17 text of Judge Russell's order into the record.

18 Quoting, "It is ordered that all information revealed
19 during the deposition of Peter N. Gale shall not be revealed by
20 any person present at the deposition to any other person other
21 than counsel for the parties who have entered appearances here-
22 in and that the deposition transcript shall not be filed in any
23 court except under seal. The District Court for the District of
24 Rhode Island may rule on any questions regarding revelation or
25 use of the deposition. It is so ordered this 26th day of April,

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1 1983."

2 It is signed by David L. Russell, United States District
3 Judge.

4 MR. PRENTISS: Any further preliminary matters by
5 any party?

6 MR. DOLAN: You might tell him about stipulations.
7 He isn't aware of the stipulations we made as to the objections.

8 MR. PRENTISS: We have stipulated that signature
9 will be reserved, that all objections save to the form of the
10 question will be reserved. Any other stipulations?

11 MR. KENNER: That any objection as to one will be
12 an objection as to all.

13 MR. PRENTISS: An objection by one defendant will
14 serve as objection by all defendants.

15 Is there any objection to the qualifications of the re-
16 porter or to the notice and time and place of taking of this
17 deposition by any party?

18 MR. CURRAN: No.

19 MR. DOLAN: No.

20 MR. KENNER: No objection.

21 PETER N. GALE

22 being first duly sworn, was examined and testified as follows:

23 DIRECT EXAMINATION

24 BY MR. PRENTISS:

25 Q Mr. Gale, in this deposition I'm going to be asking

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1 you questions. Your testimony, in answer to my questions, will
2 be taken down under oath. The transcript of this deposition,
3 subject to rulings of the Court in which this case is pending,
4 may be used at the trial of this matter. Therefore, it's impor-
5 tant that you understand my questions fully and clearly before
6 answering them.

7 Will you, therefore, at any time during the course of this
8 deposition if you do not understand my question please inform
9 me and I will then do my best to clarify the question. Is that
10 a satisfactory arrangement?

11 A Yes.

12 Q Mr. Gale, by whom are you employed?

13 A Target Reservoir Analysis, Incorporated.

14 Q What kind of a firm is that?

15 A It's a consulting firm servicing the oil industry.

16 Q What capacity is it in which you work?

17 A I'm the mineralogist, Vice President of the corpora-
18 tion and Laboratory Director.

19 Q What is your educational background briefly?

20 A I have a bachelors of science degree in geology
21 from St. Lawrence University and a master of science degree in
22 geology from the University of Vermont.

23 Q When did you receive your master of science degree?

24 A 1980.

25 Q When did you receive your undergraduate degree from

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1 St. Lawrence?

2 A 1974.

3 Q What was your field of concentration in undergra-
4 duate work?

5 A Mineralogy, petrology.

6 Q In what field did you get your masters degree?

7 A The same.

8 Q Can you describe, briefly, your professional work
9 history.

10 A In the summer of '78 I accepted a position with
11 Engelhard Minerals and Chemicals Corporation. I spent approxi-
12 mately nine months with them and in June of '79 I returned to
13 the University of Vermont to complete my thesis.

14 In September of '79 I accepted a position at the medical
15 school at the University of Vermont in the Department of Patho-
16 logy as a consultant mineralogist for the department.

17 Then, in July of 1982 I accepted a position with Target
18 Reservoir Analysis in Oklahoma City.

19 Q What month was that in 1982, sir?

20 A July.

21 Q What was your work experience between graduation
22 from St. Lawrence and going to work for Engelhard in the summer
23 of 1978?

24 A That was all my--in pursuit of my masters degree.
25 I was a student at that time.

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1 Q You used the term mineralogist to describe your
2 profession. Can you describe what that term means?

3 A
4 It implies examination of mineral components of
5 rocks from localities around the world in pursuit of determi-
6 ning their origin and ore significance in the rocks.

7 Q
8 Can you distinguish between mineralogy and geology?

9 A
10 Yes. Mineralogy is simply--I would characterize
11 it as a sub-discipline of the geology field as a whole.

12 Q
13 Would it be considered a specialty within the field
14 of geology?

15 A
16 Yes.

17 Q
18 What is petrology?

19 A
20 Petrology is simply the study of rocks.

21 Q
22 Is mineralogy a sub-specialty of petrology?

23 A
24 I would say yes.

25 Q
26 Is it fair to state that the most general description
27 of the field is geology and that a specialty within geology
28 is petrology and that a further refined specialty still
29 within petrology would be mineralogy?

30 A
31 Yes.

32 Q
33 Mr. Gale, were you asked by me to perform expert
34 services in connection with the case in which this deposition
35 is being taken?

36 A
37 Yes.

38 Q
39 Can you describe the nature of the services which

1 I requested that you perform under that agreement?

2 A You requested that I examine talc from the Johnson
3 mine in Vermont in an effort to determine the presence or ab-
4 sence of fibers in the talc.

5 Q Did I request you, as a part of your consultation
6 for me, to reveal to me information, facts which you learned or
7 obtained during the course of your employment by Engelhard?

8 A No. You did not.

9 Q Did you explain to me, reveal to me any agreements
10 that you had with Engelhard concerning your employment there and
11 restrictions on your work following employment there?

12 A Yes.

13 Q Were you contacted following my agreement with you
14 to work for the plaintiff in this case, were you contacted by
15 any person on behalf of Engelhard?

16 A Yes.

17 Q Do you know by whom you were contacted?

18 A I was contacted in the form of a letter from Arthur
19 Dornbush I believe.

20 Q To the best of your recollection, what did Mr.
21 Dornbush in that letter state to you?

22 A To the best of my recollection the letter stated
23 that the work that I might be doing for you in this case could
24 be an infringement on the confidentiality agreement that I
25 signed upon joining Engelhard.

1 Q Did you have any further contact from anyone with
2 Engelhard?

3 A I called the lawyer to--not Dornbush, but another
4 lawyer at Engelhard in reference to that letter to inform him
5 that I had not broken the confidentiality agreement and had no
6 intention of breaking that agreement.

7 Q Were you thereafter sued by Engelhard?

8 A Yes.

9 Q Following that lawsuit, did you take any action
10 with respect to the agreement that you had to consult with me
11 on behalf of the plaintiff in this case?

12 A I don't understand.

13 Q After you were sued, did you do anything about your
14 work for me as a consultant for the plaintiff in this case?

15 MR. SLOANE: Object to the form of the question.

16 Q (By Mr. Prentiss) You can answer.

17 A Yes.

18 Q What did you do?

19 A I called you and informed you that I had rather not
20 be an expert witness in the case.

21 Q As of that time you resigned?

22 A Yes.

23 Q Mr. Gale, during the time that you were employed by
24 Engelhard, what was the nature of your work?

25 A I was a mineralogist for Engelhard.

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1 Q Did you have any projects that you worked on?

2 A A number of different projects.

3 Q Did you work on any project related to the effort
4 to determine presence of various contaminants in talc that was
5 mined by Engelhard at the Johnson, Vermont mine?

6 MR. SARLI: Objection.

7 MR. KENNER: Objection.

8 THE WITNESS: Yes.

9 MR. PRENTISS: For the record, can I ask what the
10 basis of the objection is?

11 MR. KENNER: Lack of foundation. There's no foun-
12 dation for any investigation of contaminants.

13 MR. PRENTISS: Same for all?

14 Q (By Mr. Prentiss) To whom did you report when you
15 were employed by Engelhard?

16 A Frank Dzieranowski. D-z-i-e-r-a-n-o-w-s-k-i.

17 Q What was his position with the company?

18 A He was a project leader.

19 Q To whom did he report?

20 A Emil Triglia.

21 Q What did you do while you were employed with Engel-
22 hard in relation to investigation of talc?

23 MR. SLOANE: Objection.

24 MR. SARLI: I have an objection too. I think it
25 should be put on the record. I think that any questions con-

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1 cerning what Mr. Gale did at Engelhard would fall under what an
2 expert would have been doing for you independently. It takes
3 expertise to do what he did. I think your question is calling
4 for an expert testimony. Since you've indicated, and since Mr.
5 Gale himself has indicated that he is not an expert, I think
6 what you're attempting to do is provide expert testimony or
7 elicit expert testimony from a lay witness and I object.

8 MR. PRENTISS: Well, let me make it clear so
9 there's no misunderstanding on this. I am in no way questioning
10 Mr. Gale as an expert. I'm asking him facts within his know-
11 ledge from his experience. He's a precipient witness and I want
12 to develop at this deposition, not his expert opinion testimony
13 as he was asked by me to perform on behalf of the plaintiff in
14 this case. I'm asking purely historical knowledge gained by
15 him as a witness to facts that may well be in dispute in this
16 case.

17 Secondly, I don't think you have the standing to raise
18 that objection.

19 MR. SARLI: My objection is simply this, if you're
20 going to use this deposition at trial, the objection is that
21 you're eliciting expert testimony from a lay witness. The ulti-
22 mate facts that he testifies to are really the conclusions of an
23 expert and not the conclusions of a mere observer of the facts.

24 MR. SLOANE: I object to the characterization of
25 investigation in quotes.

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1 Q (By Mr. Prentiss) Did you do any studies regarding
2 talc while you were working for Engelhard?

3 A Yes.

4 Q What kind of studies regarding talc did you do at
5 Engelhard?

6 A I examined the mineralogical makeup in the talcs.

7 Q Was this study done in the same field in which you
8 obtained your degrees from St. Lawrence and the University of
9 Vermont?

10 A Yes.

11 Q Tell me what kind of studies you had done to pre-
12 pare yourself, what kind of academic study you had done to pre-
13 pare yourself for the kind of studies you did while employed by
14 Engelhard.

15 A The course work, project work and thesis work in
16 my academic pursuits many times involved mineralogical analysis.

17 Q What do you mean when you say mineralogical analy-
18 ses?

19 A I mean analyses of rocks and the constituents of
20 those rocks.

21 Q What kind of instruments did you learn to use
22 during that training for that kind of analysis?

23 MR. KENNER: What's the relevance of this? You're
24 laying expert foundation.

25 MR. PRENTISS: Your objection is noted.

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1 MR. SARLI: Why don't we make it a continuing ob-
2 jection throughout the entire course of the deposition as to
3 trying to qualify this witness as an expert in mineralogy or
4 petrology or any of the disciplines he's named.

5 Also, a continuing objection to any conclusions you may
6 elicit from him that may require the application of that
7 training and expertise.

8 MR. PRENTISS: Objection noted.

9 Do you remember the question or would you like to have it
10 read?

11 THE WITNESS: Could you repeat the question.

12 THE REPORTER: "What kind of instruments did you
13 learn to use during that training for that kind of analysis?"

14 THE WITNESS: Light microscopes, x-ray diffraction,
15 atomic absorption. That's it.

16 Q (By Mr. Prentiss) Did you, following your academic
17 training, learn to use any other instruments, analytical instru-
18 ments regarding the field of mineralogy?

19 A Yes.

20 Q What instruments?

21 A Scanning electron microscope, transmission electron
22 microscopy, x-ray fluorescence.

23 Q Is there a machine or technique that's called
24 selected area electron diffraction?

25 A Yes.

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1 Q Is that a method that you learned to use?

2 A Yes.

3 Q Is that included in one of the earlier descriptions
4 that you gave?

5 A It's a component of the transmission electron
6 microscope.

7 Q Is there a technique or methodology called electron
8 microprobe?

9 A Yes.

10 Q Is that distinct from SAED?

11 A Yes.

12 Q Is that a technique that you learned also?

13 A Yes.

14 MR. SLOANE: For clarification, Dan, could we find
15 out when he learned these last five methods?

16 Q (By Mr. Prentiss) Can you state when you learned
17 the methodologies that you've described here in this deposition
18 this morning that you did not learn while in your academic
19 studies?

20 A Transmission electron microscopy, scanning micro-
21 scopy and electron diffraction, those were learned during my
22 employ with Engelhard.

23 Q That would be between the summer of 1978 and the
24 summer of 1979 roughly?

25 A And the electron microprobe work were pursuits af-

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1 ter leaving Engelhard.

2 Q Would that be while you were at the University of
3 Vermont?

4 A Yes.

5 Q Describe in detail what studies you did while an
6 employee of Engelhard regarding talc.

7 MR. SLOANE: Objection. Note that Engelhard as-
8 serts that response to this question may reveal confidential
9 proprietary information.

10 Q (By Mr. Prentiss) You may answer.

11 A Would you repeat the question.

12 Q Yes.

13 THE REPORTER: "Describe in detail what studies
14 you did while an employee of Engelhard regarding talc."

15 THE WITNESS: I identified the mineral constituents
16 of various grades of talc from the Johnson mine.

17 Q (By Mr. Prentiss) When did that effort regarding
18 the Johnson mine begin?

19 A I believe late October of '78.

20 Q Who within Engelhard asked you to begin that work?

21 MR. SLOANE: I note my continuing objection. I'll
22 try not to burden the record with too many objections.

23 Q (By Mr. Prentiss) You may answer.

24 A Frank Dzieranowski.

25 Q Do you have any idea why Mr. Dzieranowski requested

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1 that you begin the study?

2 MR. SARLI: Objection.

3 MR. KENNER: Objection.

4 THE WITNESS: Yes.

5 Q (By Mr. Prentiss) Why is that?

6 MR. SARLI: Objection.

7 MR. SLOANE: Objection.

8 THE WITNESS: I believe he was attempting to deter-
9 mine, as I was, the mineral constituents of the talc.

10 Q (By Mr. Prentiss) What did you do first in res-
11 ponse to his request to you?

12 A I began some x-ray diffraction work.

13 Q You began the x-ray diffraction work on samples?

14 A On samples.

15 Q Where did you obtain the samples?

16 A They were production samples from the Johnson mine
17 obtained from the mine.

18 Q Do you recall today the results of your x-ray dif-
19 fraction studies in that first portion of your study?

20 A Yes. I was able to find the samples consisted of
21 talc, magnesite and chlorite.

22 Q Where did you do this x-ray diffraction study?

23 A At Engelhard in the laboratory there.

24 Q Did you pursue further studies on Johnson, Vermont
25 talc after those x-ray diffraction studies?

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1 A Yes.

2 Q When?

3 A Shortly thereafter.

4 Q On what samples did you perform those studies?

5 A I do not recall.

6 Q Do you recall where you got the samples?

7 A The samples were from the Johnson mine, yes.

8 Q What analyses did you run on the second round o.
9 studies?

10 MR. SLOANE: Objection. Engelhard asserts that
11 the information in the answer to this question may reveal con
12 dential information.

13 THE WITNESS: Could you repeat the question.

14 THE REPORTER: "What analyses did you run on the
15 second round of studies?"

16 THE WITNESS: Scanning electron microscopy, trans-
17 mission electron microscopy, selected area electron diffraction.

18 Q (By Mr. Prentiss) Where did you perform those
19 tests?

20 A Georgia Tech.

21 Q When were those tests performed?

22 A Late fall of '78 and January and February of '79
23 I believe.

24 Q Do you recall today what those tests revealed?

25 A I recall that there were fibers found in those

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1 talcs, yes.

2 Q Did you identify the nature, mineralogical natur
3 of the fibers that were found?

4 A Yes.

5 Q What was the nature of those fibers?

6 MR. SARLI: Objection.

7 MR. SLOANE: Objection.

8 THE WITNESS: I determined those fibers were cryso-
9 tile fibers.

10 Q (By Mr. Prentiss) How did you determine that those
11 fibers were crysotile fibers?

12 MR. SARLI: Objection.

13 THE WITNESS: Using selected area electron diffrac-
14 tion in conjunction with transmission electron microscopy.

15 Q (By Mr. Prentiss) Do you recall today the length
16 of the fibers which you found?

17 A No.

18 Q Did you pursue further studies of Johnson, Vermont
19 talc after those studies you just described?

20 A I performed studies on the Johnson talc on several
21 occasions between late fall of '78 and to March of '79.

22 Q As to those studies that you conducted on Johnson,
23 Vermont talc other than the first two studies that you've al-
24 ready described in your answers this morning, do you have a re-
25 collection today what the results of your analyses were?

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1 MR. SARLI: Objection.

2 MR. SLOANE: Objection.

3 THE WITNESS: No.

4 Q (By Mr. Prentiss) You don't remember distinct re-
5 sults from the results that you've already described?

6 MR. SARLI: Objection.

7 THE WITNESS: I don't understand.

8 Q (By Mr. Prentiss) Let me strike that question.

9 As I understand it, you've testified this morning that
10 your first studies on Johnson, Vermont talc were done in the
11 fall of 1978 utilizing x-ray diffraction instruments at Engel-
12 hard laboratories; is that correct?

13 A That's correct.

14 Q You testified that the studies revealed presence of
15 talc, magnesite and chlorite; is that correct?

16 A That's correct.

17 Q You testified next, as I understand it, that fol-
18 lowing that study you performed a further study utilizing scan-
19 ning electron microscopy, transmission electron microscopy and
20 selected area electron diffraction at Georgia Tech laboratories;
21 is that correct?

22 A That's correct.

23 Q Was that just one study that you performed at
24 Georgia Tech?

25 A I was at Georgia Tech on a number of occasions

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1 looking at a number of samples each time.

2 Q You testified that your analysis at Georgia Tech
3 revealed the presence of fibers and that the fibers were ident
4 fied by you as being crysotile; is that correct?

5 A That's correct.

6 Q Was that result of your analysis obtained on one
7 occasion at Georgia Tech or on more than one occasion?

8 MR. SLOANE: Object to the form. I'm not sure I
9 understand what you're asking, Dan. Are you asking did he find
10 it more than once or do more than one study?

11 Q (By Mr. Prentiss) Do you understand the question?
12 If you don't understand it I'll try to rephrase it.

13 A Rephrase it, please.

14 Q Did you find fibers, crysotile fibers, in Johnson,
15 Vermont talc on more than one occasion when you were doing
16 analysis at Georgia Tech?

17 A Let me say I found crysotile fibers in talc samples
18 that were sent to me by Engelhard and I found those fibers on
19 more than one occasion.

20 Q What kind of samples was it that were sent to you
21 by Engelhard?

22 MR. KENNER: Objection.

23 MR. SARLI: Objection.

24 THE WITNESS: The samples were production samples.

25 Q (By Mr. Prentiss) It was not raw ore?

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1 A No.

2 Q When you say production samples, does that mean
3 was talc taken from the actual production of the mine?

4 A Yes.

5 Q Talc taken from bulk that was being sold by Engel-
6 hard?

7 A I believe so, yes.

8 Q Mr. Gale, I'm going to show you a series of docu-
9 ments but first I'd like to ask you this question: Did you ever
10 take a visit to the Johnson, Vermont mine?

11 A Yes.

12 Q When was that?

13 A I believe March of '79.

14 Q Did you obtain any samples while you were there
15 visiting the mine?

16 A Yes.

17 Q Did you perform samples on those tests that you
18 took?

19 A No.

20 Q What kind of samples did you take while you were
21 there?

22 A I took samples of the talc in the mine and of wall
23 rock around those bodies.

24 Q Do I understand you to say that you took actual
25 rocks instead of powder?

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1 A Yes.

2 Q Mr. Gale, I show you a document that has been
3 marked as Plaintiff's Exhibit 15 in the deposition of Emil
4 Triglia and I'll ask that for ease of reference that it be
5 marked Exhibit 15 for this deposition.

6 (Plaintiff's Exhibit 15 marked for identification pur-
7 poses.)

8 Q (By Mr. Prentiss) Reviewing Exhibit 15, Mr. Gale,
9 do you recognize that document?

10 A I do not.

11 Q You don't have any idea what's referred to in that
12 document?

13 MR. KENNER: Objection.

14 MR. SLOANE: Objection.

15 THE WITNESS: I do not recall receiving this.

16 MR. PRENTISS: Could I have this marked as Exhibit
17 16 for identification. That is the document which was marked as
18 Exhibit 16 in the Emil Triglia deposition.

19 (Plaintiff's Exhibit 16 marked for identification pur-
20 poses.)

21 Q (By Mr. Prentiss) Mr. Gale, this is addressed to a
22 list of people, the lead one is Dzieranowski. Do you recognize
23 this document which has been marked as Plaintiff's Exhibit 16?

24 A Yes.

25 Q What was that?

1 A It was a report to my superiors on the two days
2 that I spent in Vermont examining the Emtal operation.

3 Q Was that prepared by you?

4 A Yes.

5 Q Was that prepared by you in the course of your
6 employment as part of your duties in your employment by Engel-
7 hard?

8 A Yes.

9 Q Was that prepared at or about the date of March 20,
10 1979?

11 A Yes.

12 Q Mr. Gale, can you describe for the record the John-
13 son, Vermont talc mine in just physical terms?

14 MR. SLOANE: Objection. Engelhard asserts that the
15 information requested by this question may be confidential or
16 proprietary.

17 Q (By Mr. Prentiss) You may answer.

18 A The entire operation consisted of a mine located
19 within two miles of the processing plant. Talc is extracted
20 from the mine, transported to the processing operation in trucks
21 and the talc is then processed by various means into the de-
22 sired products.

23 Q How big physically is the mine itself?

24 A I believe the mine had five levels and the deepest
25 point of the mine was approximately 1,500 feet.

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1 Q How long did the mine shafts extend?

2 A I do not know.

3 Q In the memo that you prepared that's been marked
4 as Plaintiff's Exhibit 16, you made reference in the first sen-
5 tence of the third paragraph you state, "Considering the anti-
6 quity of the mining and milling facilities at Emtal, the opera-
7 tion is efficient at the present 'peak production' of 350 tons
8 ore extracted from the mine per day."

9 Can you state what you mean by the antiquity of the faci-
10 lities in that sentence?

11 A The processing plant consists of processing mate-
12 rials and machines that were very old.

13 Q More than twenty years old?

14 A Yes.

15 Q Can you describe it any more particularly as to how
16 old the facilities were?

17 A I believe that probably most of those materials
18 used in processing dated back to the 1950's.

19 Q From your observation at the mine and at the pro-
20 cessing facilities, can you describe what the processing facili-
21 ties are there at the Johnson facility?

22 A I can describe in general terms. I recall that
23 there was some material that was crushed into the desired par-
24 ticle size and some of the material is crushed and processed
25 using water.

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1 Q What is the distinction between processing using
2 water and not doing so?

3 A Crushing and using water results in a more desir-
4 able product.

5 Q When you say more desirable, what do you mean?

6 A Finer grain size. That's all that comes to mind.

7 Q Are there various number categories that are used
8 by Engelhard or its subsidiaries to categorize the different
9 types of talc that are produced at the Johnson facility?

10 A Yes.

11 Q Is there any kind of code meaning to the numbers?

12 A Not that I recall.

13 Q Do you recall ever encountering a code or type of
14 talc that's called Emtal 42?

15 A Yes.

16 Q What was Emtal 42?

17 MR. SLOANE: Object.

18 THE WITNESS: It was simply a product of the pro-
19 cessing plant. I don't recall what history it went through to
20 become Emtal 42.

21 Q (By Mr. Prentiss) You don't recall what the degree
22 of processing there was that yielded Emtal 42 as opposed to some
23 other kind of talc?

24 A I believe Emtal 42 was a crushed grade but was not
25 processed through the water system.

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1 (Plaintiff's Exhibit 17 marked for identification pur-
2 poses.)

3 Q (By Mr. Prentiss) I'll show you what was marked
4 in the Triglia deposition as Exhibit 17 and what has been marked
5 as 17 for this deposition as well. That's a memorandum to Mr.
6 Hemstock from Mr. Lomas which is dated March 16, 1979. Exhibit
7 17 is a memo with two or three pages of maps attached to it.
8 Do you have 17 in front of you, Mr. Gale?

9 A Yes.

10 Q Can you tell me what the maps are which are appen-
11 ded to the memo which is the face sheet?

12 A They are maps of several different levels in the
13 Johnson mine.

14 Q So, for example, the first page of maps, you say
15 several different levels. Can you describe what you mean by
16 that?

17 A The first page shows the sixth level and a portion
18 of the fifth level. The second page shows a portion of the
19 fifth level and the third page is another portion of the fifth
20 level.

21 Q The numbering of these levels, is that done accor-
22 ding to the depth into the earth?

23 A Yes.

24 Q Is the higher the number of the level the deeper
25 into the earth?

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1 A Yes.

2 Q At the time that you were at the site of the mine,
3 which levels were being utilized for mining of talc?

4 A I don't know.

5 Q Do you know from your studies what is the size of
6 the ore body in which that Johnson, Vermont mine is sunk?

7 A No.

8 MR. PRENTISS: I'd like to mark as Plaintiff's
9 Exhibit 18 the exhibit marked by the same number in the Triglia
10 deposition.

11 (Plaintiff's Exhibit 18 marked for identification and made
12 a part of the record.)

13 Q (By Mr. Prentiss) Can you describe what 18 is?

14 MR. KENNER: Are you asking if he can identify it?

15 MR. PRENTISS: Yes.

16 THE WITNESS: Just a list of notes that I wrote
17 down. I recognize my own handwriting.

18 Q (By Mr. Prentiss) Do you know what those notes
19 refer to?

20 A A number of things. Apparently the price quotes
21 for transmission electron microscope evaluations outside the
22 Engelhard lab and upcoming meetings that I was to attend.

23 Q You prepared that in the course of your employment
24 by Engelhard?

25 A Yes.

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1 Q Thank you.

2 MR. PRENTISS: I'd like to have marked as Plain-
3 tiff's Exhibit 19 the exhibit that was given the same number in
4 the Triglia deposition. It's another sheaf of handwritten
5 notes which came from Exhibit 50 from the Hemstock deposition.

6 (Plaintiff's Exhibit 19 marked for identification pur-
7 poses.)

8 Q (By Mr. Prentiss) Can you identify Plaintiff's
9 Exhibit 19?

10 A I believe these are notes that I took upon exami-
11 ning several samples at Georgia Tech.

12 Q When you say you took them upon examining, can you
13 describe when you would have transcribed those notes in connec-
14 tion with your use of any instruments or facilities at Georgia
15 Tech?

16 A These notes were taken while I was actually exami-
17 ning the samples using the transmission electron microscopy.

18 Q Those are lab notes?

19 A Yes.

20 Q While we're on it I'd like to show you 20 for iden-
21 tification also handwritten notes from Exhibit 50 of the Hem-
22 stock deposition. I'd like to have those marked as 20 for this
23 deposition also.

24 (Plaintiff's Exhibit 20 marked for identification pur-
25 poses.)

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1 Q (By Mr. Prentiss) Can you identify 20, Mr. Gale?

2 A These are also notes that I took during and after
3 my examination at Georgia Tech.

4 Q What instruments were you using at the time you
5 were making these lab notes? Do you want to refer back to the
6 exhibit?

7 A Most of the material in this exhibit concerns work
8 subsequent to my examination.

9 Q When you say this exhibit, are you referring to 20?

10 A Yes.

11 Q When you say subsequent to your examination, can
12 you tell me when Exhibit 20, when those notes would have been
13 prepared in relation to your use of the instruments?

14 A After collecting data using the transmission elec-
15 tron microscopy I used the numbers that I collected to further
16 examine and conduct the investigation.

17 MR. SLOANE: Objection. I should note for the re-
18 cord that Engelhard specifically objects to 19 and 20.

19 MR. DOLAN: I also object.

20 Q (By Mr. Prentiss) For what purpose were you utili-
21 zing the transmission electron microscope during those studies
22 that are memorialized in your notes which are Exhibits 19 and 20?
23 If you'd like to refer to these exhibits just say so and we'll
24 give them to you.

25 MR. SARLI: Objection to the question.

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1 THE WITNESS: I was using the transmission electron
2 microscope specifically to identify different morphological
3 characteristics of some mineral constituents in some of the
4 talcs.

5 Q (By Mr. Prentiss) Can you describe for the record
6 exactly what you did in order to conduct these studies? Just
7 lead us briefly through the steps.

8 MR. SARLI: Note my continuing objection on the
9 expert and the testimony being elicited.

10 MR. SLOANE: Please note by continuing objection
11 with respect to the confidential nature of these documents and
12 this information.

13 MR. DOLAN: I also object.

14 Q (By Mr. Prentiss) You may answer.

15 A The samples were disbursed in an alcohol. Very
16 small amounts were then extracted from the disbursement and placed
17 on copper TEM brigs that had been previously coated with Parlo-
18 dian.

19 Q Coated with what, sir?

20 A Parlodian. It's a plastic type material used as a
21 support.

22 After preparation the samples were coated with carbon and
23 subsequently examined using the transmission electron microscope.

24 Q What was it that you looked for when you examined
25 the sample through the transmission electron microscope?

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1 A Morphological characteristics of the mineral
2 species.

3 Q In particular, what morphological characteristics
4 were you looking for?

5 A I was looking for differences in shape, looking
6 for plates, fibers.

7 Q Did you find fibers?

8 MR. SARLI: Objection.

9 MR. DOLAN: Objection.

10 THE WITNESS: In some samples.

11 Q (By Mr. Prentiss) What samples was it that you
12 were analyzing in your use of the instruments memorialized in
13 the notes which are labeled Exhibit 19 for this deposition?

14 A I was looking at talc samples.

15 Q Talc samples from where?

16 MR. SARLI: Objection.

17 THE WITNESS: I do not recall.

18 MR. DOLAN: I object to that question.

19 Q (By Mr. Prentiss) On the first page of this exni-
20 bit, there appears in the right hand column a series of numbers.
21 Do you know what those numbers signify?

22 A Those numbers are sample identification numbers.

23 Q In the second column of Exhibit 19 right next to
24 the column of numbers, there are on four lines names in paren-
25 thesis. Emtal 500, Emtal 42 at the top and then down at the

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1 bottom Emtal 500 and Emtal 42 again. What does that signify?

2 MR. SARLI: Objection.

3 MR. SLOANE: Objection.

4 THE WITNESS: It apparently signifies the talc
5 grade that corresponds to the sample number identification.

6 MR. SARLI: Objection.

7 MR. SLOANE: Objection. If the witness has a re-
8 collection you're entitled to it, but speculation you're not.
9 If the witness is speculating I think that answer should be
10 stricken from the record.

11 Q (By Mr. Prentiss) Do you have any present recol-
12 lection of what samples of talc you were testing when you did
13 these procedures that are memorialized as Exhibit 19?

14 A No.

15 Q Turn, please, to the last two pages--excuse me.
16 The last four pages of Exhibit 19. Do you have that?

17 A Yes.

18 Q What is contained on those last four pages?

19 A Several numbers that correspond to some of the
20 physical parameters I set up in this investigation.

21 Q Can you state what is portrayed on these last four
22 pages in relation to the notes that are in the earlier pages of
23 Exhibit 19?

24 A They are the results of the examination.

25 Q There are several columns of figures on these last

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1 four pages. Each column is headed by a number which in the
2 first instance is J792R34979H. Can you refer back to earlier
3 parts of that exhibit to determine what that refers to?

4 MR. SLOANE: Again, you're asking for the witness's
5 specific recollection and not speculation I take it.

6 MR. PRENTISS: Certainly.

7 THE WITNESS: I do not recall.

8 Q (By Mr. Prentiss) Viewing the last--I'm sorry,
9 did you have something else?

10 MR. KENNER: There is no question.

11 Q (By Mr. Prentiss) Viewing the last four pages,
12 for example the first column J79-2R-349-79H, at the bottom ap-
13 pears the word Emtal 42. Does that refresh your recollection
14 as to what that sample number was?

15 MR. SARLI: Objection.

16 THE WITNESS: May I speak with him?

17 MR. PRENTISS: Certainly.

18 (A discussion was held off the record.)

19 Q (By Mr. Prentiss) Do you remember the question?

20 A Would you read it back, please.

21 THE REPORTER: "Viewing the last four pages, for
22 example the first column J79-2R-349-79H, at the bottom appears
23 the word Emtal 42. Does that refresh your recollection as to
24 what that sample number was?"

25 THE WITNESS: No.

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1 Q (By Mr. Prentiss) Do you recall today where the
2 talc samples came from that you tested during the time you were
3 running these tests at Georgia Tech?

4 A No.

5 MR. SARLI: Objection.

6 Q (By Mr. Prentiss) What talc was it that you were
7 testing at Georgia Tech?

8 MR. SARLI: Objection.

9 THE WITNESS: I tested talc samples that were sent
10 to me by Engelhard.

11 Q (By Mr. Prentiss) Did Engelhard identify to you
12 at the time that it sent you those samples what those samples
13 were?

14 A No, they did not.

15 Q How did you keep separate the various types of talc
16 samples of talc, that you received?

17 A Using identification numbers.

18 Q What identification would you receive from Engel-
19 hard with the talc samples that you received for study?

20 A Each sample to be investigated had a number associ-
21 ated with it.

22 Q Do you know whether all of the talc samples came
23 from Johnson, Vermont?

24 A No.

25 Q Exhibit 19 has on the last four pages with each

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1 sample number--first, are those the numbers you're referring to,
2 the numbers in the first three lines for example, J-79-2R-349-798?
3 Is that the sample identification number you refer to?

4 A Yes.

5 Q Beneath that is the word Emtal 42. Is that in your
6 handwriting?

7 A Yes.

8 Q Do you have any recollection today for what reason
9 you put the name Emtal 42 beneath that sample number?

10 MR. SARLI: Objection.

11 MR. KENNER: Objection.

12 MR. SLOANE: I think you're badgering the witness.
13 He testified he doesn't have any recollection. You're just
14 asking it in a slightly different way.

15 Q (By Mr. Prentiss) You can answer.

16 A Would you repeat the question.

17 Q Sure.

18 THE REPORTER: "Do you have any recollection today
19 for what reason you put the name Emtal 42 beneath that sample
20 number?"

21 THE WITNESS: Subsequent to the investigation the
22 names of these talcs were matched with the numbers identified,
23 identifying the samples.

24 Q (By Mr. Prentiss) Who provided that matching to
25 you?

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1 A I do not recall.

2 Q Someone else provided that information to you?

3 A Yes.

4 Q Was that someone within Engelhard?

5 A Yes.

6 Q Emtal 42, is that a name of a talc that's manufac-
7 tured by Engelhard?

8 A Yes.

9 Q What is Emtal 500?

10 A Another name of a talc manufactured by Engelhard.

11 Q With respect to the numbers that appear here, again

12 we'll stay referring to this first of the four summary pages,
13 there's used a notation, for example, "Number of fibers calcu-
14 lated per milligram of sample, 6.6×10^4 " and then there's a four
15 that appears next to the ten. What does that notation mean?

16 A Those were numbers that I was attempting to gene-
17 rate in an effort to quantify the fibers in the talc samples I
18 examined.

19 Q What I'm asking you, though, is whether you can
20 convert these scientific notations to numbers more commonly
21 utilized, hundreds and thousands and things like that?

22 MR. KENNER: Objection.

23 MR. SARLI: Objection.

24 MR. SLOANE: Objection.

25 THE WITNESS: Those numbers were based on extrapo-

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1 lations made from counting of fibers in the talc samples using
2 the transmission electron microscope.

3 MR. SARLI: Objection. Motion to strike.

4 Q (By Mr. Prentiss) How many thousands does 6.6
5 times 10 to the fourth power compute to?

6 A 66,000.

7 Q Just so that we'll have this clear for the record,
8 how many thousands is the number 5.29 times 10 to the sixth?

9 MR. SARLI: Objection.

10 THE WITNESS: Five million two hundred ninety
11 thousand.

12 Q (By Mr. Prentiss) Are your numbers here that are
13 stated in terms of exponents of the figure 10 stated in standard
14 scientific notation?

15 A Yes.

16 Q That's widely utilized means of writing down large
17 numbers?

18 A Scientific notation, yes.

19 Q Exhibit 20, does that refer to the same series of
20 tests that are memorialized on Exhibit 19?

21 MR. SARLI: Objection.

22 MR. DOLAN: Objection.

23 THE WITNESS: I don't know.

24 Q (By Mr. Prentiss) From reviewing Exhibit 20, can
25 you tell who the manufacturer or producer of the talc is that

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1 was tested in your tests that are memorialized in Exhibit 20?

2 MR. KENNER: Could you read back the question,
3 please?

4 THE REPORTER: "From reviewing Exhibit 20, can you
5 tell who the manufacturer or producer of the talc is that was
6 tested in your tests that are memorialized in Exhibit 20?"

7 MR. SLOANE: Dan, if he has a recollection.

8 MR. DOLAN: I object to the question.

9 THE WITNESS: I do not recall.

10 Q (By Mr. Prentiss) I will show you two pages from
11 this exhibit which appear about in the middle there, both on
12 the Engelhard minerals and chemical calculations form entitled
13 talc investigation sheets one of three and the next one is not
14 numbered. Referring you to certain names that appear on the
15 left hand side of the page, does that refresh your recollection
16 as to the source of the talc that was being tested in the tests
17 that you were doing that are memorialized on Exhibit 20?

18 MR. SARLI: Objection.

19 MR. DOLAN: I object.

20 THE WITNESS: I can see from reading this document
21 that there are different talc species examined.

22 MR. KENNER: Objection. Motion to strike.

23 Q (By Mr. Prentiss) Does that exhibit refresh your
24 recollection of what talc was examined?

25 A Yes.

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1 Q Could you state for the record what talk it was by
2 your refreshed recollection?

3 MR. SARLI: Without reading from the document.

4 Q (By Mr. Prentiss) If you're able to.

5 A Not without reading from the document.

6 MR. SLOANE: So that the record is perfectly clear,
7 Mr. Gale's answer to his last question was based upon what he
8 read on the document; is that correct?

9 THE WITNESS: That's correct.

10 Q (By Mr. Prentiss) Mr. Gale, I don't know if we
11 went through this. Was Exhibit 20 prepared by you in the course
12 of your employment by Engelhard?

13 A Yes.

14 Q Was Exhibit 19 prepared by you in the course of
15 your employment by Engelhard?

16 A Yes.

17 Q Was it a part of your duties in your employment by
18 Engelhard to make notes and records such as those which are
19 marked as Exhibit 19 and 20?

20 A Yes.

21 Q Were they made at or about the same time as the
22 events that you were noting down in these two exhibits?

23 A Yes.

24 Q Mr. Gale, who was Mr. Ojala, O-j-a-l-a?

25 A Mr. Ojala was a geologist employed by Engelhard at

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1 the time I was also employed by Engelhard.

2 Q Was he a mineralogist?

3 A No.

4 Q I'm going to show you what was marked as Exhibit
5 23 in the Triglia deposition. Again, this is from Exhibit 50
6 of the Hemstock deposition. It's a three-page letter to Mr.
7 John Brown from Mr. Gale dated March 21, 1979. I'd like to have
8 that marked as Exhibit 23 for this deposition.

9 (Plaintiff's Exhibit 23 marked for identification pur-
10 poses.)

11 Q (By Mr. Prentiss) Can you identify that document,
12 please, Mr. Gale.

13 A This is a document apparently accompanying samples
14 sent to Mr. John Brown at Georgia Tech.

15 MR. SLOANE: Objection. Move to strike to the ex-
16 tent that it's unresponsive to the question. Again, if the
17 witness has a recollection we're all entitled to it. Specula-
18 tion on what it is apparently or not apparently is not the ques-
19 tion.

20 Q (By Mr. Prentiss) Can you identify it, Mr. Gale,
21 from your own recollection?

22 A Not from my recollection, no.

23 Q Is that your signature that appears on page two?

24 A Yes.

25 Q Was it the regular course of your business in the

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1 employment of Engelhard to send samples to Mr. John Brown of
2 the Georgia Institute of Technology?

3 A It was not a regular part of my position, no.

4 Q Did you ever?

5 A Yes.

6 Q On more than one occasion?

7 A I don't recall.

8 Q I want to refer you specifically to that portion
9 of the first page of the letter which states certain criteria
10 for measurements. They're lettered A, B, C through G.

11 Reviewing that, do you have a present recollection of
12 what those criteria were intended to be utilized for?

13 MR. SARLI: Objection.

14 MR. KENNER: Objection.

15 THE WITNESS: No.

16 Q (By Mr. Prentiss) You have no present recollec-
17 tion?

18 A No.

19 Q I'd like to have marked as Exhibit 24 the memoran-
20 dum of April 4, 1979 from Mr. Gale to various individuals which
21 was marked as 24 in the Triglia deposition.

22 (Plaintiff's Exhibit 24 marked for identification pur-
23 poses.)

24 Q (By Mr. Prentiss) Can you identify that?

25 A Yes.

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1 Q What is it?

2 A It's some preliminary results on the examination of
3 talc that I undertook at Georgia Tech.

4 Q Did you prepare that in the course of your employ-
5 ment by Engelhard?

6 A Yes.

7 Q Was it part of your employment responsibility to
8 prepare memoranda such as that?

9 A Yes.

10 Q Was it prepared at or about the time it was marked
11 on the memorandum, that is the date April 4, 1979?

12 A Yes.

13 Q To be clear on this, could I see the previous ex-
14 hibit, I think it was Exhibit 23. Can you testify from Exhibit
15 23 whether you prepared that?

16 MR. SLOANE: Whether he prepared 23?

17 MR. PRENTISS: Yes.

18 THE WITNESS: You're asking whether I wrote this
19 letter?

20 Q (By Mr. Prentiss) That's right.

21 MR. SLOANE: Again, if you have any recollection.

22 THE WITNESS: I don't recall writing this letter.

23 Q (By Mr. Prentiss) That is your signature that ap-
24 pears there?

25 A Yes.

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1 Q I'd like to have marked as Exhibit 25 the same
2 number from the Triglia deposition, a memorandum to Mr. Triglia
3 from Mr. Gale dated April 11, 1979.

4 (Plaintiff's Exhibit 25 marked for identification pur-
5 poses.)

6 Q (By Mr. Prentiss) Could you review Exhibit 25 and
7 see if you can identify that, Mr. Gale.

8 A These are results of the talc investigation I did
9 at Georgia Tech. It was sent to Mr. Triglia.

10 Q Did you prepare that memorandum?

11 A Yes.

12 Q Did you prepare that in the course of your employ-
13 ment by Engelhard?

14 A Yes.

15 Q Was it a part of your business or responsibilities
16 as an employee of Engelhard to prepare memorandum such as 25?

17 A Yes.

18 Q Was it prepared on or about the date April 11,
19 1979 that appears on the face page of that memo?

20 A Yes.

21 Q To whom was that submitted?

22 A Emil Triglia.

23 MR. SLOANE: On behalf of Engelhard, I'd like to
24 assert with respect to both 24 and 25, specifically, that this
25 information is confidential and proprietary.

1 MR. PRENTISS: I'd like to have marked as Exhibit
2 26 an exhibit by the same number from the Triglia deposition.
3 It's a short memoranda dated April 19, 1979 from Mr. Gale.

4 (Plaintiff's Exhibit 26 marked for identification pur-
5 poses.)

6 Q (By Mr. Prentiss) Can you identify 26?

7 A It's a correction on the talc investigation review
8 and update that I sent to someone on the 11th.

9 Q Was that a correction to what has been marked as
10 Exhibit 25?

11 MR. SLOANE: If you recall.

12 THE WITNESS: I don't recall.

13 MR. PRENTISS: Why don't we take a break.

14 (A recess was taken.)

15 MR. PRENTISS: Is there a question pending?

16 THE REPORTER: No.

17 MR. PRENTISS: I would like to have this marked as
18 Plaintiff's Exhibit No. 27.

19 (Plaintiff's Exhibit 27 marked for identification pur-
20 poses.)

21 Q (By Mr. Prentiss) Can you identify Exhibit 27?

22 A It's a letter to me from Walter C. McCrone Associ-
23 ates.

24 Q Did you receive that in response to a request that
25 you made of McCrone Associates?

1 MR. MORGAN: If you know.

2 THE WITNESS: I don't recall.

3 MR. PRENTISS: I'd like to have marked as Exhibit
4 28 what was marked as 23 in the Hemstock deposition. It's also
5 28 in the Triglia deposition.

6 (Plaintiff's Exhibit 28 marked for identification pur-
7 poses.)

8 Q (By Mr. Prentiss) Can you identify 28?

9 A These are some notes that I collected on various
10 items on talc and meetings upcoming.

11 Q In what context was it that you prepared those
12 notes?

13 A Some of the notes, there's also some work I have
14 done at Georgia Tech. There are some upcoming procedures that I
15 was at least thinking about using.

16 Q Let's go through page by page. What is page one?

17 A Page one has a number of numbers on it that refer
18 to some of the physical parameters I used to do the talc inves-
19 tigation.

20 Q Did you prepare that?

21 A Yes.

22 Q In the course of your employment with Engelhard?

23 A Yes.

24 Q When was it that you prepared that?

25 A I don't know.

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1 Q When was that prepared in relation to any studies
2 that you might have been doing at Georgia Tech?

3 A I don't know.

4 Q Does that relate in any way to studies at Georgia
5 Tech?

6 A Yes.

7 Q What is the relationship between page one of that
8 exhibit and your studies at Georgia Tech?

9 MR. SLOANE: Object as to form.

10 Q (By Mr. Prentiss) Go ahead.

11 A These are various parameters that I used with the
12 data collected at Georgia Tech to evaluate the samples.

13 Q Does page one portray any information regarding
14 your studies at Georgia Tech?

15 MR. SLOANE: Objection. I think we should be clear
16 as to these answers. If the witness has a specific recollection
17 apart from the document, fine. Let's all hear it. If he
18 doesn't and he's just reading from the document I think that
19 should also be stated in the record.

20 MR. PRENTISS: Wait a minute. He can identify
21 that document and he can tell what it is from his own intelli-
22 gence looking at the document and looking at the information
23 portrayed on it. He can state for the record what it is that
24 is contained on that document. He doesn't have to have a spe-
25 cific recollection of the day, hour and minute that he wrote

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1 down each letter on the document.

2 MR. SLOANE: Dan, you know darn well that's not
3 what I said. What I said was, if he has a recollection of what
4 is written on that document then let's understand that that's
5 what he's testifying to. I'll be glad to sit here all day and
6 let him read from it but I want to make sure the record is
7 clear that that's what he's doing. If he has a recollection
8 apart from what is written on there, fine, let him testify to
9 it. If he doesn't and you want him to read it into the record
10 he can sit here and read it into the record but the record
11 should be clear as to what's going on.

12 MR. PRENTISS: Could I have the question read
13 back, please.

14 THE REPORTER: "Does page one portray any informa-
15 tion regarding your studies at Georgia Tech?"

16 THE WITNESS: Only from what I read on the docu-
17 ment. I don't recall the specifics of the contents of this
18 document.

19 Q (By Mr. Prentiss) What is it that that document
20 portrays regarding the Georgia Tech studies?

21 A It says that it is the talc investigation. That's
22 the title of the first page.

23 Q What's the body, what's the content of that memo-
24 randum?

25 A As I read it, these are several parameters that

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1 were used in my attempt to quantify the fibers found in some of
2 the talc samples that I examined.

3 Q These portray, somewhat, the results of your stu-
4 dies?

5 MR. SARLI: Objection.

6 MR. SLOANE: Objection. Dan, if the witness has a
7 recollection, fine. If he's reading from the document I'd like
8 for him to so state on the record.

9 THE WITNESS: Would you repeat the question,
10 please.

11 MR. PRENTISS: Sure.

12 THE REPORTER: "These portray, somewhat, the re-
13 sults of your studies?"

14 MR. PRENTISS: I'll rephrase that question.

15 Q (By Mr. Prentiss) Do those portray the results of
16 your studies, one set of studies?

17 MR. SARLI: Object.

18 THE WITNESS: These numbers portray my attempt to
19 quantify the fibers that I found in some of the talcs that I
20 investigated.

21 Q (By Mr. Prentiss) As to page two of the exhibit,
22 is that a continuation of the information on page one?

23 A By looking at the document, yes.

24 Q Page three, what does that represent?

25 MR. SLOANE: Objection. Dan, would you like for me

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1 to read the document into the record? If the witness has a---

2 MR. PRENTISS: Hey, you were allowed to participate
3 to state the confidentiality reservation of Engelhard. You're
4 not a party and I don't want to hear your objections anymore.

5 MR. SLOANE: Mr. Prentiss, I object to your poin-
6 ting your finger at me in a threatening manner the way you've
7 just done and raising your voice. There's no need for that kind
8 of talk or act in this room. We'll all act like gentlemen I
9 hope.

10 THE WITNESS: Would you repeat the question,
11 please.

12 THE REPORTER: "What does that represent?"

13 THE WITNESS: From reading the document, it repre-
14 sents a proposed phase contrast method for counting asbestos
15 fibers.

16 Q (By Mr. Prentiss) Could you turn to page four of
17 the document, please. What does that represent?

18 A I can't see from this document what it does repre-
19 sent.

20 Q The next page, what does that represent?

21 A I don't know.

22 Q Will you turn to the next page. What is that?

23 MR. DOLAN: Would you identify that, please.

24 MR. PRENTISS: Yeah. This is, again, a graph sheet
25 that is headed Engelhard Minerals and Chemicals Corporation Pro-

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1 ject No. 100236 number one and it's a series of columns of hand-
2 written data.

3 Q (By Mr. Prentiss) Can you tell me what that page
4 of the exhibit is?

5 A The document says it's TEM work on crysotile fibers
6 from production samples.

7 Q Can you further describe the next page of that
8 exhibit?

9 A The page indicates that there are more physical
10 parameters of some of the samples that I examined.

11 Q I believe this is the last page.

12 A The last page simply has some of my notes, some
13 work upcoming as I read it.

14 Q Each of these pages, are they in your handwriting?

15 A Yes.

16 Q Each of these pages was prepared by you in the
17 course of your employment by Engelhard?

18 A Yes.

19 Q Was it the normal and ordinary course of your em-
20 ployment by Engelhard and your responsibilities with Engelhard
21 to prepare notes such as that?

22 A Yes.

23 Q Were they prepared at or about the same time you
24 obtained the information that is portrayed on those pages?

25 A Yes.

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1 MR. KENNER: I think the record should reflect
2 that the copy that's being used, I believe, is incomplete and
3 has some--is cut off by the copying process on the bottom of
4 certain of the pages. Perhaps you can inquire of the witness
5 whether this appears to be the whole document.

6 Q (By Mr. Prentiss) Are you able to answer that,
7 whether there's any information on those sheets that was cut off
8 by the copying process?

9 A From examining the document here, dates and names
10 of to who the information was sent, it has been cut off in the
11 copying process.

12 Q That is, the dates and names to whom the material
13 was sent was cut off or partially cut off in the copying pro-
14 cess?

15 A Yes.

16 MR. SARLI: One other thing with that exhibit, Dan,
17 and if you don't want me to do it now, fine. I just want to
18 know if the witness recalls that being a complete document as
19 presented to him stapled together and bound in that format or
20 is this just a random selection of notes that has been stapled.
21 Can you tell us that?

22 THE WITNESS: It's my recollection that these are
23 just a random selection of notes based on the work that I did.

24 MR. PRENTISS: I'd like to have marked what was
25 marked as Plaintiff's Exhibit 36 for the Hemstock deposition,

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1 I'd like to have this marked 29 for this deposition, the same
2 number with which it was marked in the Triglia deposition.

3 (Plaintiff's Exhibit 29 marked for identification pur-
4 poses.)

5 Q (By Mr. Prentiss) Can you review Exhibit 29 and
6 identify that, please?

7 A I cannot identify this.

8 Q I show you what I'd like marked as Exhibit 31 for
9 this deposition, what was marked as Exhibit 45 in the Hemstock
10 deposition.

11 (Plaintiff's Exhibit 31 marked for identification pur-
12 poses.)

13 MR. SARLI: Dan, did you skip a number?

14 MR. PRENTISS: I've been skipping throughout.
15 There is a 45 Hemstock number and it was marked as 31 in the
16 Triglia deposition. We've marked it as 31 in this deposition
17 too.

18 Q (By Mr. Prentiss) That shows you what has been
19 marked as Plaintiff's Exhibit 31 for identification, Mr. Gale.
20 Can you identify that?

21 A No, I cannot.

22 Q You haven't seen that before?

23 A No.

24 Q I'd like to show you what was marked as Exhibit 50
25 in the Hemstock deposition--excuse me. The first several pages

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1 of what was marked as Exhibit 50 in the Hemstock deposition
2 which appears to be photocopies of text material. First I'd
3 like to have that marked for this deposition as Exhibit 50.

4 (Plaintiff's Exhibit 50 marked for identification pur-
5 poses.)

6 Q (By Mr. Prentiss) Can you review Exhibit 50 and
7 tell me whether you can identify that, please, Mr. Gale.

8 A It's simply copies out of publications.

9 Q Did you have those copies in your laboratory note-
10 book while you were working at Engelhard?

11 MR. KENNER: Objection.

12 THE WITNESS: I do not recall.

13 Q (By Mr. Prentiss) Are you familiar with the publi-
14 cations from which those copies were made?

15 MR. KENNER: Objection.

16 THE WITNESS: By looking at the documents, I know
17 what publication they are from.

18 Q (By Mr. Prentiss) Can you identify those publica-
19 tions, please.

20 A These first six pages are from Dana's Textbook of
21 Mineralogy.

22 Q What is the second one from?

23 A This second paper, it says on the document is from
24 a publication Clays and Clay Minerals.

25 Q Is that a textbook?

1 A This is a publication, a quarterly publication.

2 Q A periodical?

3 A Yes, a periodical.

4 MR. PRENTISS: I have no further questions, Mr.
5 Gale. Thank you.

6 CROSS-EXAMINATION

7 BY MR. SARLI:

8 Q Mr. Gale, you mentioned in your earlier testimony
9 that you made a trip to the Johnson mine in Vermont and had
10 taken some samples from that mine. Do you recall what level
11 you took those samples from?

12 A I do not recall.

13 Q I'll just show you a document you talked about in
14 your deposition, Plaintiff's Exhibit 16.

15 A Uh-huh.

16 Q On the second page you refer to taking the samples
17 from level five.

18 A Yes.

19 Q Does that refresh your recollection?

20 A Yes.

21 Q Do you have any recollection of taking samples any-
22 where else in the Johnson mine other than level five?

23 A I do not recall.

24 Q This document wouldn't refresh your recollection
25 as taking them from any other levels other than what is noted in

1 Plaintiff's Exhibit 167

2 A No.

3 Q Next I'd like to show you a letter which we also
4 talked about, Plaintiff's Exhibit 27, to you from McCrone.

5 A Yes.

6 Q Would you review that letter.

7 A Yes.

8 Q Are you familiar with that letter?

9 A Yes.

10 Q Did you ever have any subsequent conversations with
11 Mr. Geiger concerning that letter?

12 A Yes, I did.

13 Q Can you tell me what the nature of your conversa-
14 tions were?

15 MR. DOLAN: I object.

16 THE WITNESS: I felt the results were suspect.

17 Q (By Mr. Sarli) When did you feel the results
18 stated in Plaintiff's Exhibit 27 were suspect?

19 A Because I had examined the samples prior to sending
20 them to McCrone and I was looking for confirmation of my re-
21 sults. I felt that their data wasn't consistent with my data.
22 I subsequently called McCrone and they said they would check
23 into the apparent inconsistencies.

24 They called back and indicated to me that the samples had
25 been mixed up.

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1 Q That McCrone had mixed up the samples?

2 A Yes. I don't recall which specific samples had
3 been mixed up. That's all I recall.

4 Q Did they ever issue a follow-up to Plaintiff's
5 Exhibit 27 correcting their mixup?

6 A I don't recall.

7 Q Do you know whether or not they ever sent a formal
8 letter to anybody at Engelhard that indicated that the samples
9 they had received had been mixed up?

10 A To my recollection it was simply a phone conversa-
11 tion with me.

12 Q Did you report that to your superiors at Engelhard?

13 A I reported that to Mr. Dzieranowski.

14 Q Could you tell me, when you talk of a mixup with
15 the samples at McCrone, did they elaborate any on what the mixup
16 was?

17 A To my recollection one of the samples they had re-
18 ferred to with one sample number and there had been a mistake.
19 It should have been another sample number. That's all I recall.

20 Q In your earlier testimony, you have several times
21 used the word morphology to define your analysis. Would you
22 tell us what you mean by that.

23 A Morphology simply refers to mineral shape. Some
24 morphological features would be plates, fibers.

25 Q The analysis that Mr. Prentiss has asked you about

1 today, were they made based upon a morphological criteria as
2 opposed to any other criteria?

3 A The transmission electron microscopy worked alone
4 is used to identify morphologies of individual mineral species.

5 Q That would be what it physically looks like?

6 A Yes.

7 Q Is that the substance of the analyses that is re-
8 ported in the various documents you've been shown today?

9 A No. Identification of the fibers is made not only
10 on morphology but on selected area electron diffraction pat-
11 terns which are characteristic of the structures of those mine-
12 rals.

13 Q Prior to coming to Engelhard, did you have any
14 training or experience in performing this type of analysis?

15 A Not with transmission microscopy, no.

16 Q How long had you been doing it prior to performing
17 these analyses that you've already testified to?

18 MR. SLOANE: Objection. Doing what?

19 MR. SARLI: I'm sorry. How long had you been using
20 the transmission electron microscopy?

21 THE WITNESS: I had not used the transmission elec-
22 tron microscope prior to my employment with Engelhard.

23 Q (By Mr. Sarli) How long had you been using it be-
24 fore you went down to Georgia Tech?

25 A Georgia Tech was my initial use of the instrument.

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1 Q Since that time, have you come to use it more and
2 more?

3 A Yes.

4 Q Would you say that it takes some experience to be
5 able to use the process and machinery with accuracy?

6 MR. PRENTISS: Objection.

7 THE WITNESS: Yes.

8 Q (By Mr. Sarli) Would you say that that experience
9 helps you to become more accurate in your interpretation of what
10 you're seeing?

11 MR. PRENTISS: Objection.

12 THE WITNESS: Yes.

13 Q (By Mr. Sarli) Would you also say that the type of
14 particles that you're observing under a transmission electron
15 microscope are infinitesimal in size?

16 MR. PRENTISS: Objection.

17 THE WITNESS: They are small at the micron level.

18 Q (By Mr. Sarli) Just for us lay people, is a micron
19 smaller than the head of a pin?

20 A A micron is one-millionth of a meter and it is
21 smaller than the head of a pin.

22 Q Can you see one micron with a regular light micro-
23 scope?

24 A No.

25 Q When you get down into particles that size, does it

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1 take some interpretation to determine exactly what you're looking
2 at?

3 A I don't understand the question.

4 Q Would you feel that to identify things under trans-
5 mission electron microscopy it takes some interpretation on the
6 part of the person looking at it to know exactly what they are
7 as opposed to a bunch of specks or dots or whatever?

8 MR. PRENTISS: Objection.

9 THE WITNESS: Yes.

10 Q (By Mr. Sarli) Actually it's an opinion you're
11 forming on what you're looking at as opposed to just being a
12 fact; is that right?


13 MR. PRENTISS: Objection.

14 THE WITNESS: Identification of the particle is
15 based on analytical techniques.

16 Q (By Mr. Sarli) Have you ever run into a situation
17 where two people of equal experience will look at a sample and
18 conclude that they are looking at different things, on this sub-
19 micron level?

20 MR. PRENTISS: Objection.

21 THE WITNESS: Yes.

22 Q (By Mr. Sarli) Do you know the difference between
23 the term fiber and fibro? 

24 A Yes.

25 Q Would you define for me what a fiber is and then

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1 define for me what a fibril is?

2 A There is much encompassed in the definition of
3 fiber. I can only state generalities.

4 It is an entity that has something greater than a three
5 to one aspect ratio which is length to width. An individual
6 component of a fiber is a fibril.

7 Q In other words, a fiber is made up of particles
8 which are somehow attached end to end to make up a substance
9 which us lay people may say looks like a hair?

10 MR. PRENTISS: Objection.

11 THE WITNESS: Not necessarily end to end, but it is
12 a substance that is a collection of fibril.

13 Q (By Mr. Sarli) Do these fibers ever break?

14 A Yes.

15 Q Do these fibers ever break into fibril?

16 A Yes.

17 Q How does that happen?

18 A There are weak crystoline planes in some fibers
19 and breakage may occur along those planes.

20 Q In determining whether or not something is truly a
21 fiber, isn't it important also to consider the elasticity of the
22 thing you're looking at as opposed to just whether it is a one
23 to three aspect ratio?

24 MR. PRENTISS: Objection.

25 THE WITNESS: I do not believe that is encompassed

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1 in the definition of a fiber, no.

2 Q (By Mr. Sarli) Did you ever, in performing any of
3 your analyses at Georgia Tech, ever consider whether or not the
4 things you were looking at had any elasticity when you were con-
5 cluding that they were or were not fibers?

6 A One cannot estimate elasticity. Perhaps that's not
7 the correct term.

8 I made some conclusions as to whether the fibers were
9 curvilinear in form or whether they were straight acicular fea-
10 tures.

11 Now, if you mean that elasticity and whether the fibers
12 were curved or not, if you take those terms as synonymous, then,
13 I investigated fiber elasticity.

14 Q Well, I don't know. I understand what you told me
15 you did. I just know the term elasticity from my own reading
16 and that is a lay reading.

17 One other thing I wanted to ask you about, on Exhibit 28
18 you characterized pages one and two as attempts to quantify.
19 I'd like to know why you used the word attempt in your answer.

20 A Would you repeat the question, please.

21 THE REPORTER: "One other thing I wanted to ask
22 you about was, on Exhibit 28 you characterized pages one and
23 two as attempts to quantify. I'd like to know why you used the
24 word attempt in your answer."

25 THE WITNESS: I used the word attempt because these

1 are not hard quantitative numbers. That is, they do not cor-
2 respond to a known method and to my knowledge there is not a
3 method in fact that can quantify fibers at this scale and with
4 this little material.

5 Q (By Mr. Sarli) Were you ever criticized by any of
6 your superiors for attempting to utilize the analysis that
7 you've shown on the first two pages of Exhibit 28?

8 A I recall someone stating that they suspected that
9 these numbers were not hard quantitative numbers and I agreed
10 wholeheartedly with them.

11 Q Would that have been Mr. Triglia to your recollec-
12 tion?

13 A I don't recall who it was.

14 Q One other thing that I'd like to ask you about,
15 first in a general sense, are you aware of a procedure commonly
16 used in testing where the person wishing to have the material
17 tested deliberately includes in the samples one that they know
18 is contaminated with whatever they're seeking, in order to
19 verify the ability of the tester? Are you aware of that proce-
20 dure?

21 A That's a very common practice.

22 Q It is a common practice?

23 A Yes.

24 Q Did they ever use that at Engelhard to your know-
25 ledge?

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1 A To my recollection I used it with the McCrone
2 samples.

3 Q Would those be the McCrone samples that are re-
4 ferred to on Plaintiff's Exhibit 27?

5 A Yes.

6 Q Did you purposely send McCrone an exhibit--I'm
7 sorry, did you purposely send to McCrone a sample which had been
8 contaminated with crysoton?

9 MR. SLOANE: Objection.

10 THE WITNESS: To the best of my recollection I did.

11 MR. SARLI: I don't have any further questions.

12 MR. KENNER: I have a few questions.

13 CROSS-EXAMINATION

14 BY MR. KENNER:

15 Q Mr. Gale, do you know a fellow by the name of
16 Glassley, that's G-l-a-s-s-l-e-y, who is a mineralogist in
17 Vermont?

18 A Yes.

19 Q Describe how you know Mr. Glassley.

20 A I met him some years ago because he was working
21 with a professor that I worked with at the University of
22 Vermont.

23 Q Do you know that Mr. Glassley has been identified
24 as a consultant to the plaintiff in this case?

25 MR. PRENTISS: I'm going to object to this line of

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1 questioning.

2 Q (By Mr. Kenner) Withdraw that.

3 Do you know whether or not Mr. Glassley has been retained
4 by plaintiff in connection with this case?

5 MR. PRENTISS: Objection.

6 THE WITNESS: Yes.

7 Q (By Mr. Kenner) You do know that he has?

8 A Yes.

9 Q Have you ever talked about this case with him?

10 MR. PRENTISS: Objection.

11 THE WITNESS: Yes.

12 Q (By Mr. Kenner) When was that?

13 MR. PRENTISS: Wait a minute. I'm going to object
14 and I want to state something for the record.

15 This examination, I perceive getting very close to getting
16 into work that Mr. Gale did during the time that he was retained
17 as an expert for the plaintiff. We've been through on the re-
18 cord in this deposition the fact that he was retained and was
19 consulting for the plaintiff for a period of time prior to his
20 being sued by Engelhard.

21 Mr. Gale was consulted by me frequently by telephone and
22 the questions that you're beginning to ask him are getting into
23 work product that was developed for the plaintiff in connection
24 with this litigation. Any consultation that Mr. Gale did with
25 Mr. Glassley was at my request as a part of his work for me.

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1 Mr. Gale has submitted a bill for that consultation that
2 he gave me during that time. You have no right to inquire into
3 the work product that Mr. Gale produced as an expert for the
4 plaintiff in spite of the fact that that relationship, that
5 expert relationship, has now terminated.

6 MR. KENNER: Let me inquire and get Mr. Gale's
7 testimony instead of yours, Mr. Prentiss.

8 Q (By Mr. Kenner) When was it that you had a conver-
9 sation with Mr. Glassley concerning this case?

10 MR. PRENTISS: Objection.

11 THE WITNESS: I don't recall.

12 Q (By Mr. Kenner) Was it prior to the time when you
13 informed Mr. Prentiss that you would no longer serve as an ex-
14 pert witness?

15 MR. PRENTISS: Objection.

16 THE WITNESS: Yes.

17 Q (By Mr. Kenner) It was prior to that time?

18 A Yes.

19 Q It was during the period, during which you were
20 serving as a consultant or serving as an expert for Mr. Prentiss?

21 A Yes.

22 Q What services did you perform for Mr. Prentiss?

23 MR. PRENTISS: Objection. Again, and I'll ask the
24 aid of Mr. Gale's personal counsel, I considered that the time
25 he was working for me as a part of this case, his work is exclu-

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1 sively a work product and I am requesting that Mr. Gale not
2 answer any questions that delve into his work for me as an ex-
3 pert for the plaintiff. You're not entitled to that informa-
4 tion.

5 MR. SLOANE: I'd like for the record to reflect
6 again, that Mr. Prentiss seems to think we're in a large con-
7 ference hall. He's raising his voice and talking in a threa-
8 tening manner to counsel at this table. I don't think that's
9 the kind of conduct that we all should aspire to in this liti-
10 gation. I would ask you to lower your tone and let's behave
11 like gentlemen.

12 MR. KENNER: I'm more concerned about the repre-
13 sentation of Mr. Gale as being a fact witness and now we find
14 out he's a valued expert.

15 MR. SLOANE: Moreover, I think the record will
16 reflect, and I would like to refresh everyone's recollection,
17 that the person who first raised this topic this morning was
18 none other than Mr. Prentiss who asked Mr. Gale within the first
19 five minutes of his deposition about his communications with
20 him and his role as an expert witness in this case.

21 To the extent that there may have been any privilege,
22 I respectfully submit that it might have been waived.

23 MR. PRENTISS: That's absolutely false.

24 MR. CURRAN: Wait a minute. Are you contending
25 that the privilege has been waived?

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1 MR. KENNER: No. The most that is contended is
2 that the material may be subject to a qualified work product
3 protection first of all. There hasn't even been an assertion
4 of any privilege.

5 MR. SLOANE: I was speaking in terms of the work
6 product privilege.

7 MR. CURRAN: Well, just as an attorney, I join
8 with Mr. Prentiss on that. An expert that is not going to be
9 used by a party and what we did with that expert has no rele-
10 vancy as far as what he did. I don't think you can inquire of
11 that.

12 MR. KENNER: Let's go off the record for a minute.
13 (A discussion was held off the record.)

14 MR. PRENTISS: I want to make it clear for the
15 record that it is only a matter of expediency that I would ac-
16 quiesce in having that question asked and answered at this de-
17 position. I'm not in any way waiving my objection to the entire
18 line of questioning.

19 Q (By Mr. Kenner) Mr. Gale, did you provide Mr.
20 Glassley any samples in connection with his work in this case?

21 A No.

22 Q Are you aware of whether Mr. Glassley has any such
23 samples?

24 MR. PRENTISS: Objection. That's one question too
25 many.

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1 MR. MORGAN: As counsel for Mr. Gale, we think
2 that if there's going to be any further questioning regarding
3 work product that Mr. Gale did for Mr. Prentiss, we think we
4 ought to have a ruling from the Court on that.

5 Until we do have, I think we will refrain from giving any
6 further answers to this line of questioning.

7 MR. KENNER: Are you directing him not to answer?

8 MR. MORGAN: I'm directing him not to answer until
9 we have a ruling from the Court. Just as we took up our matter
10 as to whether he should testify here in the first place, I
11 think this should be taken up with the Court.

12 Q (By Mr. Kenner) What dates were you at Georgia
13 Tech, what months and years?

14 A I believe January, February and March of '79.

15 Q For a consecutive three-month period?

16 A No. These were one to two-week intervals of time.

17 Q During your work at Georgia Tech, did you work
18 alone or did you work in conjunction with someone?

19 A I worked in conjunction with the technicians at the
20 experiment station there.

21 Q You relied, in your work, on certain work that they
22 were performing in conjunction with you?

23 A Yes.

24 Q The samples that you were looking at at Georgia
25 Tech, did you bring them with you to Georgia Tech?

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1 A On one occasion I did. On other occasions they
2 were sent to me.

3 Q On the occasion when they were sent to you, do you
4 know how they found their way to Georgia Tech?

5 A They were sent to me by Engelhard.

6 Q How would you come into possession of them at
7 Georgia Tech?

8 A They were sent directly to the experiment station
9 where I was to my attention.

10 MR. KENNER: I don't have anything further.

11 MR. DOLAN: I have no questions.

12 MR. SARLI: I have one question.

13 MR. MORGAN: When you get through I have one ques-
14 tion I want to ask him.

15 MR. SARLI: You have a question?

16 MR. MORGAN: Yes. Go ahead. When you get through
17 I have one.

18 REXCROSS-EXAMINATION

19 BY MR. SARLI:

20 Q At some point in time you resigned from being an
21 expert for the plaintiff. Is that fair to say?

22 A That's correct.

23 Q Did you have any communications with Mr. Glassley
24 after that point in time concerning this case?

25 A No.

1 MR. PRENTISS: Objection.

2 MR. SARLI: That's all I have.

3 MR. MORGAN: I just have one question, one or two
4 questions. Do you want to go ahead?

5 MR. PRENTISS: You go ahead. Then, if you have
6 any after I get through you can finish up.

7 CROSS-EXAMINATION

8 BY MR. MORGAN:

9 Q Some of the answers to the questions of Mr. Pren-
10 tiss, you stated "I believe" and "apparently."

11 I take it from those answers that you gave that it could
12 be speculation, a guess on your part?

13 MR. PRENTISS: Objection.

14 THE WITNESS: That's correct. My only recollection
15 of the work that I did concerning talc samples is just that I
16 conducted an investigation of a number of talc samples, none of
17 the specifics therein.

18 Q (By Mr. Morgan) In regard to all the exhibits that
19 you have reviewed that have been presented by Mr. Prentiss,
20 apart from reading the documents themselves except where you
21 specifically clarified like you did in reference to Exhibit 27,
22 you don't have any recollection as to the contents of those do-
23 cuments? Is that correct?

24 A Not other than reading them.

25 MR. MORGAN: That's all.

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REDIRECT EXAMINATION

BY MR. PRENTISS:

Q Mr. Gale, you testified in the first part of this deposition that tests that you conducted, including SAED and TEM confirmed the presence of crysotile fibers in the talc that you studied. Do you recall that testimony?

A Yes.

Q Are you clear in your recollection of that being a result of your studies?

A Yes.

Q You're not speculating as to that, are you?

MR. SARLI: Objection.

THE WITNESS: No.

Q (By Mr. Prentiss) When you were working at Georgia Tech, you testified you weren't working alone. Did you work with other people who taught you the use of transmission electron microscope?

A All the work that I did was in conjunction with a professional on the individual machine.

Q So that you would not be working alone on this machine, you would be working in conjunction with a professional who was helping you utilize the machine?

A And directing the things that I wanted to look at, yes.

Q Do you have any doubts today as to the accuracy or

1 quality of the results that you obtained from your TEM work at
2 Georgia Tech during that period of time?

3 MR. SARLI: Objection.

4 MR. KENNER: Objection.

5 MR. SLOANE: Objection.

6 MR. DOLAN: Objection.

7 THE WITNESS: Would you repeat the question?

8 THE REPORTER: "Do you have any doubts today as to
9 the accuracy or quality of the results that you obtained from
10 your TEM work at Georgia Tech during that period of time?"

11 THE WITNESS: I have no reservations about the ac-
12 curacy and the quality of the work. I do have some reservations
13 about the extent to which it was pursued.

14 Q (By Mr. Prentiss) What are those reservations?

15 A The minerals examined should have been examined by
16 a transmission electron microscopy using selected area electron
17 diffraction but that data should also have been combined with
18 elemental analysis of the same species.

19 Q When you say that the figures, the quantification
20 of the fibers that you've included on what are marked as Exhi-
21 bits, among others, 28, you said those are not hard numbers.
22 By that do you mean that these numbers are the result of an
23 extrapolation process from your examination of a very small
24 sample?

25 A That's correct.

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1 Q Extrapolation, is that a common methodology in
2 scientific research?

3 MR. SARLI: Objection.

4 MR. KENNER: Objection.

5 THE WITNESS: I was merely attempting to quantify
6 the fibers that I did find in the rocks and that is simply why
7 I said those are not hard quantitative numbers.

8 Q (By Mr. Prentiss) Referring you to Exhibit 28,
9 you've got a line across--I guess it's the fourth line down
10 where you have numbers 24, 25, 230, 38. Are those extrapolated
11 numbers or are those the actual count numbers?

12 A Those are actual count numbers.

13 Q Are those hard numbers?

14 MR. SLOANE: Again, I object to this line of in-
15 quiry. You're asking for the witness's recollection. He's tes-
16 tified at least twice that---

17 MR. PRENTISS: Your objection is noted.

18 MR. SLOANE: I'll finish my objection too, please.

19 He's testified at least twice that he has no recollection
20 apart from what is written on the document. I think you're con-
21 fusing the witness as to whether he has a recollection or what
22 is written on the document.

23 Q (By Mr. Prentiss) Mr. Gale, you testified that
24 some portion of the numbers that are portrayed on, for example,
25 Exhibit 28, are not hard. When you stated that were you refer-

1 ring to the numbers that are in that line of 24, 25, 230, 38?

2 A No. I was not referring to those.

3 Q How would you characterize those in terms of your
4 characterization of some not being hard?

5 A Those are actual fiber counts. I consider those
6 to be number of fibers per fifteen grid openings as read on the
7 document.

8 Q With respect to the third column there are two
9 asterisks behind the number. That refers down to the bottom.
10 Was that figure 230 per fifteen grid openings?

11 A As I read on the document it's 230 per eight grid
12 openings.

13 Q Your statement of not being hard refers to extra-
14 polation from your firm count up to the hypothetical figure
15 that that would result in per larger sample; is that right?

16 A That's correct.

17 Q Do you know of any more accurate manner of deter-
18 mining the quantity of fibers than the method that you used?

19 MR. DOLAN: Objection.

20 MR. SARLI: Objection.

21 MR. KENNER: Objection. Sounds like expert testi-
22 mony.

23 THE WITNESS: Yes.

24 Q (By Mr. Prentiss) What is that?

25 MR. SARLI: Objection.

1 THE WITNESS: Specialized methods in x-ray dif-
2 fraction.

3 Q (By Mr. Prentiss) You stated that you examined
4 these fibers for curvilinear properties. Do you recall that
5 testimony?

6 A Yes.

7 Q Did you utilize your results of that analysis of
8 curvilinear properties in your conclusions stated early on in
9 this deposition that there was crysotile in the talc that you
10 studied?

11 MR. SARLI: Objection. Motion to strike.

12 THE WITNESS: Could you repeat that question.

13 THE REPORTER: "Did you utilize your results of
14 that analysis of curvilinear properties in your conclusions
15 stated early on in this deposition that there was crysotile in
16 the talc that you studied?"

17 THE WITNESS: The answer is no.

18 Q (By Mr. Prentiss) Well, to what extent did you
19 make use of your analysis of whether any of these fibers were
20 curvilinear?

21 MR. SARLI: Objection.

22 THE WITNESS: I noted when I saw curvilinear fibers,
23 however I don't believe that a curvilinear fiber implies in any
24 way the identity of that fiber.

25 MR. SARLI: Objection. Motion to strike.

1 Q (By Mr. Prentiss) Did you see curvilinear fibers
2 in your analysis of the talc?

3 A Yes.

4 MR. PRENTISS: That's all I have. Thank you.

5 MR. SARLI: I have a follow-up.

6 FURTHER RECROSS-EXAMINATION

7 BY MR. SARLI:

8 Q In one of your answers to Mr. Prentiss you indi-
9 cated or talked about elemental analysis. What is that?

10 A Energy dispersive x-ray spectrometry and/or wave-
11 length spectrometry are analytical means of developing an ele-
12 mental analysis for a mineral species.

13 Q What does an elemental analysis tell you?

14 A It tells you the elemental components of the mine-
15 ral or species in question.

16 Q Please bear with me. I'm new to all this. What
17 do you mean by elements of the species in question?

18 A The elements in quartz is silica. If I examine a
19 quartz particle using transmission electron microscopy I could
20 tell you what the morphology was, what the selected area elec-
21 tron diffraction was which is an indication of its crystal
22 structure and I could tell you that there were silica as an
23 element in that particle based on energy dispersive spectrometry.
24 Or wavelength dispersive spectrometry.

25 Q Why would you want to do that? Why would you want

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1 to pursue that with respect to any of your talc studies that
2 you've testified about today?

3 A It was simply another means of differentiating the
4 individual mineral species.

5 Q In other words, it would help you to identify what
6 is crysotile as opposed to something else?

7 A That's correct.

8 Q Is it possible that an element that you may have
9 identified as crysotile by using the earlier two methods that
10 you talked about and not performing an elemental analysis,
11 could after elemental analysis be determined to be something
12 other than crysotile?

13 MR. PRENTISS: Objection.

14 THE WITNESS: That is a possibility.

15 MR. SARLI: That's all.

16 FURTHER REDIRECT EXAMINATION

17 BY MR. PRENTISS:

18 Q Did you recommend that Engelhard pursue further
19 analysis of these samples along the lines that you've identi-
20 fied?

21 MR. SLOANE: Objection.

22 THE WITNESS: No.

23 Q (By Mr. Prentiss) So why wasn't it pursued?

24 MR. SLOANE: Objection. Why wasn't it pursued af-
25 ter he left the company? Objection.

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1 Q (By Mr. Prentiss) While you were at the company
2 why didn't you pursue it?

3 MR. SLOANE: Objection.

4 THE WITNESS: At that time I did not recognize the
5 potential aid in the analytical process of these methods.

6 MR. PRENTISS: Thank you. For the record, let me
7 state that I will take the exhibits that have been marked for
8 identification in this deposition home with me. I would like
9 to have the original deposition, after review by Mr. Gale, sent
10 to me. I will file the deposition, the original deposition,
11 with the clerk of the U. S. District Court for the District of
12 Rhode Island under seal after I receive it and I will move as
13 I see appropriate with Judge Boyle for further use of any in-
14 formation derived from this deposition.

15
16 Peter N. Gale

17 STATE OF OKLAHOMA)
18) SS:
19 COUNTY OF OKLAHOMA)

20 Subscribed and sworn to before me this _____ day of
21 _____, 1983.

22
23 Notary Public

24 My Commission Expires:
25 _____

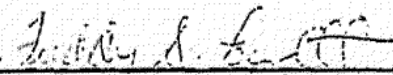
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C E R T I F I C A T E

STATE OF OKLAHOMA)
) SS:
COUNTY OF OKLAHOMA)

I, Freddy D. Leggett, Shorthand Reporter and Notary Public
for the State of Oklahoma, certify that Peter N. Gale was by me
sworn to testify the truth; that the deposition was taken by me
in stenotype and thereafter transcribed and is a true and cor-
rect transcript of the testimony of the witness; that the depo-
sition was taken on April 26, 1983, at 10:00 a.m., at 1923
Classen Boulevard, City of Oklahoma City, County of Oklahoma,
State of Oklahoma; that I am not an attorney for or a relative
of either party, or otherwise interested in this action.

Witness my hand and seal of office on this 28th day
of May, 1983.


Freddy D. Leggett, Shorthand
Reporter and Notary Public for
the State of Oklahoma

My Commission Expires: 12-22-84

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Exhibit 191

1 UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF RHODE ISLAND

3 DAVID HOWARD WESTFALL, IN HIS
4 CAPACITY AS ADMINISTRATOR OF
5 THE ESTATE OF THOMAS HOWARD
6 WESTFALL AND IN HIS CAPACITY AS
ADMINISTRATOR OF THE ESTATE OF
BETTY E. WESTFALL,
Plaintiff

7 vs. C.A. No. 79-0269

8 WHITTAKER, CLARK & DANIELS,
9 METROPOLITAN TALC COMPANY, INC.,
and OMYA, INC., itself and as
10 successor to VERMONT TALC
COMPANY, INC.,
Defendants

11 WINDSOR MINERALS, INC., itself
12 and as successor to EASTERN
13 MAGNESIA TALC COMPANY, INC.,
Defendant and
14 Third-Party Plaintiff

15 vs.
16 MINERALS & CHEMICALS PHILLIP
CORPORATION,
17 Third-Party Defendant

18 Continued deposition of GLENN HEMSTOCK,
19 taken on behalf of the Plaintiff, pursuant to the Federal
20 Rules of Civil Procedure, on March 16, 1983, at the offices
21 of Deçof & Grimm, One Smith Hill, Providence, Rhode Island,
22 convening at 10:00 a.m., before Jeanne M. St. Hilaire-Derha
23 Notary Public.

24 REPORTING ASSOCIATES
Shorthand Reporters
25 205 Howard Building
Providence, RI 02903

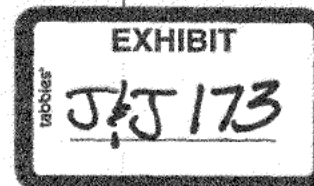
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APPEARANCES:

Decof & Grimm
One Smith Hill
Providence, Rhode Island 02903
BY: DANIEL R. PRENTISS, ESQ.,...On behalf of the Plaintiff

Hinckley & Allen
2200 Fleet National Bank Building
Providence, Rhode Island 02903
BY: MICHAEL G. SARLI, ESQ.,.....On behalf of Whittaker,
Clark & Daniels

Hanson, Curran & Parks
1210 Turks Head Building
Providence, Rhode Island 02903
BY: WILLIAM A. CURRAN, ESQ.,....On behalf of Metropolitan
Talc Company, Inc.

Rice, Dolan, Kiernan & Kershaw
101 Dyer Street
Providence, Rhode Island 02903
BY: JOHN F. DOLAN, ESQ.,.....On behalf of Omya, Inc.

Nutter, McClellenn & Fish
600 Atlantic Avenue
Boston, Massachusetts 02210
BY: EDWARD P. LEIBENSPERGER, ESQ.,...On behalf of Windsor
Minerals, Inc.

Adler, Pollock & Sheehan
2300 Hospital Trust Tower
Providence, Rhode Island 02903
BY: PETER LAWSON KENNEDY, ESQ.,.
- and -

Cahill, Gordon & Reindel
80 Pine Street
New York, New York 10005
BY: HOWARD G. SLOANE, ESQ.,
- and -

THOMAS D. HALKET, ESQ.
Menlo Park, CN 28
Edison, New Jersey 08818.....On behalf of Engelhard
Corporation and
Glenn Hemstock

* * * * *

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I N D E X

DEPOSITION OF DR. GLENN HEMSTOCK

PAGE NO.

Examination by Mr. Prentiss

4

E X H I B I T S

NO.

(All exhibits were marked prior
to commencement of deposition.)

- 1 Inter-Department Memorandum dated
October 9, 1972 from E. J. Triglia
- 2 A document to the file from J. M.
Zimmermann dated October 30, 1980
- 3 A Technical Service Request from
J. H. Shafer dated February 28, 1973
- 4 A Technical Service Request from
J. M. Zimmermann dated January 17, 1979
- 5 Document entitled "Proposed
Experimental Design for Fiber
Distribution"
- 6 A Technical Service Request from
J. M. Zimmermann dated September 6, 1977
- 7 A Technical Service Request from
R. E. Lomas dated January 29, 1979
- 8 Letter from Royal-Globe Insurance Co.
to Mr. Victor A. Backels dated
August 18, 1972
- 9 Document entitled "Attachment V"
from R. A. Nadkarni dated October 27, 1978
- 10 Letter from Johns-Manville to
Engelhard Minerals & Chemicals
Division dated September 5, 1972
- 11 Document entitled "Mineralogy, Identi-
fication, and Quantification of Airborne
Talc Dust"

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E X H I B I T S (Continued)

<u>NO.</u>	
12	Inter-Department Memorandum dated August 22, 1972 from J. H. Shafer
13	Inter-Department Memorandum dated September 16, 1971 from T.D. Oulton
14	Technical Service Request from J. H. Shafer dated March 30, 1979
15	Document entitled "History of Asbestos-Related Mineralogical Terminology"
16	Inter-Department Memorandum dated December 1, 1977 from G. Y. Haas
17	Technical Service Request from A. L. Yunko dated October 12, 1973
18	Document to A. L. Yunko dated May 31, 1979
19	Letter from Walter C. McCrone Assoc., Inc., dated June 27, 1977 to Mr. Frank J. Dzierzanowski
20	Inter-Department Memorandum dated August 18, 1977 from K. Newger
21	Technical Service Request from C. Y. Haas dated March 29, 1977
22	Letter from Walter C. McCrone Assoc., Inc. dated April 30, 1979 to Mr. Peter N. Gale
23	Document entitled "Talc Investigation" containing calculations
24	Document entitled "Petrographic Examination of Two Talcose Rock Samples from Northern Vermont"
25	Letter from the H.E.W. dated January 19, 1973 to Mr. A. J. Dankwerth
26	Letter from U.S. Dept. of Labor dated July 19, 1979 to Mr. J. Howard Shafer

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iii

E X H I B I T S (Continued)

<u>NO.</u>	
27	Note from the desk of G.A. Hemstock dated September 1, 1972
28	Inter-Department Memorandum dated March 13, 1979 from J. M. Zimmermann
29	Purchase Requisition dated May 1, 1973 for Johns-Manville Research & Engineering Center
30	Letter from the Minerals & Chemical Division dated November 21, 1977 to Bobby F. Craft, Ph.D.
31	Conversation memo dated February 6, 1979
32	Pages of calculations dated January 19, 1977
33	Inter-Department Memorandum dated August 3, 1979 from R.E. Lomas
34	Calculations entitled "Waterbury Talc Study"
35	Technical Service Request from R.W. Wert dated June 24, 1982
36	Inter-Department Memorandum from E. J. Triglia dated May 22, 1979
37	Document entitled "Talc Morphology as Revealed by Scanning Electron Microscopy"
38	Note from the office of E. J. Triglia
39	Letter from Fred W. Farwell dated November 10, 1977 to Mr. Frank J. Dzierzanowski
40	Inter-Department Memorandum dated April 20, 1978 from K. Newger
41	Technical Service Request dated March 11, 1982 from R. M. Kazimir
42	Letter from the Minerals & Chemicals Division dated October 2, 1980 to Mr. Mark Palenik

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E X H I B I T S (Continued)

<u>NO.</u>	
43	Document entitled "The Basic Mineralogical Dichotomy in the Selevan Epidemiology Study"
44	Inter-Department Memorandum dated September 26, 1977 from T. D.Oulton
45	Inter-Department Memorandum dated July 17, 1979 from E. J. Triglia
46	Group of documents, first page of which is a list of figures
47	Document entitled "VAG Core Samples"
48	Technical Service Request dated July 27, 1982 from K. L. Kayler
49	Documents contained on pocket of binder
50	Documents contained in binder
51	Letter from Minerals & Chemical Division dated June 13, 1979 to Mr. John Brown

* * * * *

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(PLAINTIFF'S EXHIBIT NOS. 1 THROUGH 51 WERE
RECEIVED IN EVIDENCE FOR IDENTIFICATION)

MR. KENNEDY: Just to reiterate what we
have said during the last deposition session, Dr. Hem-
stock has no documents in his possession.

Consequently, he could not respond to the subpoena
duces tecum. Engelhard Industries, however, as an
accommodation, has searched its records and has provided
me with copies of documents or the originals of docu-
ments, if the originals existed, which we have brought
with us. They've already been copied so we can mark
up the copies rather than mark up the originals that
have been provided by Engelhard. We have withheld
very, very few documents which we consider privileged.
Those are documents which are between counsel and the
client, and at some time later we will provide you
with a catalogue of those documents so that you will
be able to refer to that in the event you feel that
you can force us to divulge those documents.

MR. HALKET: Engelhard Industries is a name
of a division.

MR. KENNEDY: We also discovered yesterday
some records, research records, that are in bound
volumes, and those have been culled and there are some
pages that have been photostated relative to the call

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1 of the subpoena duces tecum.

2 MR. PRENTISS: Where are those now?

3 MR. KENNEDY: They're in the batch of
4 documents which you've already copied.

5 MR. PRENTISS: When will the catalogue of
6 documents for which you claim privilege be made avail-
7 able?

8 MR. KENNEDY: Midweek next week, only be-
9 cause everybody is going to be out of town running
10 here and there. I think it would be a short list.

11 MR. PRENTISS: Anything further prelimi-
12 narily?

13 MR. KENNEDY: That does it.

14 MR. HALKET: I would like to say one more
15 thing for the record. The records that Engelhard
16 searched were the records of its Research Division
17 only. It may have searched some other records, but
18 we can only certify that we searched the records of
19 the Research Division.

20 MR. PRENTISS: Very well.

21 MR. LEIBENSPERGER: Any stipulations with
22 respect to objections?

23 MR. PRENTISS: Well, I would suggest that
24 we preserve all objections other than to form of ques-
25 tion until trial unless you propose any other stipula-

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1 tion,

2 MR. LEIBENSPERGER: No. That's acceptable
3 to me.

4 MR. KENNEDY: That's fine.

5 MR. PRENTISS: What about signing of the
6 deposition? Do you require it?

7 MR. KENNEDY: I would like the deposition
8 to be reviewed and then signed with or without any
9 corrections as is necessary.

10 MR. PRENTISS: Shall we proceed?

11 MR. KENNEDY: All right. I just want to
12 make one other statement, that we have modified the
13 secrecy stipulations to the extent that it is accep-
14 table to everybody here, and we're going to circulate
15 that during the deposition.

16 MR. PRENTISS: What I'd like to do is just
17 take an opportunity to look through the amendments and
18 sign it. I don't anticipate that I'll have any objec-
19 tion, but at the break, I'll sign it and I'll represent
20 -- I don't expect problems, and we can mark that stipu-
21 lation as an exhibit to the deposition at that time.
22 Okay?

23 MR. KENNEDY: All right, fine.

24 GLENN HEMSTOCK, first having been duly sworn
25 by the Notary Public, testified as follows:

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EXAMINATION BY MR. PRENTISS:

1
2 Q Dr. Hemstock, you are the same Glenn A. Hemstock whose
3 deposition was begun in this proceeding on Friday,
4 January 28, 1983 in the offices of Cahill, Gordon &
5 Reindel, 80 Pine Street, New York, New York?

6 A I am.

7 MR. PRENTISS: Doctor, I'll remind you that
8 you are again under oath, and that this deposition is
9 a continuation of the deposition that was begun at
10 that time.

11 THE WITNESS: Yes.

12 Q Doctor, when did your employer first become involved
13 in the business relating to talc?

14 A During the late 1960's.

15 Q How did it become involved in the talc business?

16 A I don't know.

17 Q When did your employer first engage in either the
18 production or sale of talc?

19 MR. KENNEDY: Excuse me. Could we have a
20 clarification, Dan? The production is one question,
21 and the sale is another question.

22 Q Okay. I'll divide it up. When did your employer first
23 become involved in the sale of talc?

24 A I do not know.

25 Q When did it first become involved in the production of

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1 talc?

2 A I do not know.

3 Q Do you know when your employer first acquired an in-
4 terest either directly or through any subsidiary
5 corporations in a producing facility of talc?

6 A No, I don't.

7 Q Did your employer ever either directly or through a
8 subsidiary become involved in the production of talc?

9 THE WITNESS: Would you repeat that ques-
10 tion, please?

11 (PREVIOUS QUESTION READ BY REPORTER)

12 A Yes.

13 Q Did it acquire any talc-producing mines?

14 A Yes.

15 Q Which ones?

16 A The Johnson mine. I'm not aware of others.

17 Q The Johnson mine, by that you refer to Johnson, Vermont?

18 A Johnson, Vermont.

19 Q And do you know whether your employer either directly
20 or through a subsidiary purchased that mine from any
21 other entity?

22 A I do not know.

23 Q Did your employer ever -- was your employer ever in-
24 volved in any way with a talc mine in Waterbury,
25 Vermont?

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b

1 A I'm not aware of that.

2 Q Was it through a subsidiary that your employer owned
3 the Johnson, Vermont mine?

4 A I don't know.

5 Q Did you personally undertake any involvement with your
6 employer's business in talc?

7 A No, I did not.

8 Q Did you personally oversee any investigations, studies
9 or research regarding talc?

10 A Only in very general terms.

11 Q In what terms were those?

12 A The Research Department is a service department for
13 the division. That means that we, at request of other
14 departments, will provide service of a technical nature
15 relevant to our products. In that context, I was
16 generally involved in activities of a technical nature
17 in talc.

18 Q When you said division, are you referring to the
19 Minerals and Chemicals Division of Engelhard Corpora-
20 tion?

21 A Yes, I am.

22 Q And department, by department, are you referring to
23 the Department of Research and Development?

24 A Yes, I am.

25 Q That is the Department of Research and Development of

ENGELHARD CORP., NEW YORK, N.Y. 10022 - YORK 510

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1 Engelhard Corporation?

2 A That is the Department of Research and Development of
3 the Minerals and Chemicals Division of Engelhard
4 Corporation.

5 Q What was the nature of the research that took place
6 within that department regarding talc?

7 A Researcher's role was a supporting role. We did not
8 undertake formal research studies on talc.

9 Q Did anybody either within Engelhard Corporation or at
10 the behest of Engelhard Corporation undertake research
11 regarding talc?

12 A Not to my knowledge.

13 Q To your knowledge, has anybody employed by Engelhard
14 Corporation ever undertaken studies regarding possible
15 contaminants contained in talc?

16 THE WITNESS: Would you repeat the question,
17 please?

18 (PREVIOUS QUESTION READ BY REPORTER)

19 A Only in the context that I previously mentioned; that
20 is, research personnel provided a service in a tech-
21 nical consulting role and carried out whatever was
22 necessary in the way of laboratory tests.

23 Q What were the laboratory tests or other services that
24 were carried out?

25 A We, at that time, and still do have the capabilities

1 of running total chemical analysis, particle size
2 distribution, x-ray diffraction, oil absorption,
3 surface area. Those are the major ones.

4 Q Were those facilities used in regard to research on
5 talc?

6 A They were used as requested by our clients.

7 Q Who were your clients?

8 A Our clients in this case were other departments within
9 Engelhard Corporation, within the Minerals and Chemi-
10 cals Division of Engelhard Corporation.

11 Q Were you ever requested, and by you I mean the Research
12 and Development Department you referred to, to test
13 talc for content of asbestos or possible asbestos
14 contamination?

15 A Yes.

16 Q When was the first time, to your knowledge, that your
17 department conducted tests of that nature?

18 A I don't recall.

19 Q Would it have been as early as the early seventies?

20 A It may have been.

21 Q Over what period of time has that kind of testing taken
22 place?

23 A It has occurred intermittently over, I suppose, one
24 could say a number of years.

25 Q Up until the present?

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1 A Yes, up until the present.

2 Q Do you know the purpose for which your department was
3 requested to make that kind of research?

4 A Generally, it was in response to a request from the
5 Marketing or Sales Department.

6 Q One of the clients that you referred to is the Engel-
7 hard -- excuse me, is Eastern Magnesia Talc Company?

8 A I don't understand the question.

9 Q You made reference -- I'll rephrase the question. You
10 made reference to your department conducting tests
11 and studies as a result of requests of clients. Do
12 you remember that answer?

13 A Yes.

14 Q You state clients. Is one of those clients the
15 Eastern Magnesia Talc Company?

16 A To the degree that Eastern Magnesia Talc Company was
17 a -- was the source of the talc which Engelhard
18 Corporation sold.

19 Q And to what degree is that?

20 A Well, that is the source of the talc that we produce.

21 Q Is that the only source of the talc that your employer
22 produces?

23 A To my knowledge, yes.

24 Q To your knowledge, is that -- has that always been the
25 only source of talc which your employer produces?

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1 A To my knowledge, yes.

2 Q Are you aware that asbestos or asbestiform minerals
3 sometimes are associated with talc and talc deposits?

4 (OBJECTION BY ALL DEFENSE COUNSEL)

5 MR. KENNEDY: Are you talking about in
6 general?

7 MR. PRENTISS: In general.

8 A In trace quantities in some samples, in some deposits,
9 some areas of some deposits.

10 Q Is it your testimony, then, that asbestos at maximum
11 is only present in general in talc in trace quantities?

12 (OBJECTION BY ALL DEFENSE COUNSEL)

13 MR. CURRAN: An objection for one Defendant
14 will be an objection for all.

15 MR. PRENTISS: Dr. Hemstock, I'm going to
16 ask the Reporter to read back the question just before
17 the last one, and before you answer the question, I
18 want you to understand that I'm asking you from your
19 knowledge in general as to talc, not your knowledge as
20 to any specific talcs produced by your employer.

21 THE WITNESS: Yes, I understand.

22 (PREVIOUS TWO QUESTIONS READ BY REPORTER)

23 Q Could you answer that question?

24 A Yes.

25 MR. KENNEDY: Yes, you can answer it; or

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1 yes is the answer?

2 MR. LEIBENSPERGER: He's answered that one.

3 Q Your answer to the question, and understanding the
4 question is phrased in general, not with respect to
5 any particular talc, your answer is yes?

6 A Yes.

7 Q Is it your understanding that -- let me ask you this.
8 Which types of asbestos is it, to your understanding,
9 that are generally associated with talc or talc de-
10 posits?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 MR. SLOANE: Do you understand the question?

13 THE WITNESS: I understand the question.

14 A The only asbestos mineral that I'm aware of that
15 exists in trace quantities in talc is chrysotile.

16 Q To your knowledge, is tremolite asbestos ever asso-
17 ciated with talc or talc deposits?

18 (OBJECTION BY ALL DEFENSE COUNSEL)

19 A I don't consider tremolite to be an asbestos mineral.

20 Q But do you understand that tremolite is sometimes
21 associated with talc?

22 (OBJECTION BY ALL DEFENSE COUNSEL)

23 THE WITNESS: In general?

24 MR. PRENTISS: Yes.

25 A In general, sometimes.

1 Q Do you know what an amphibole is?

2 A I can only answer that in general terms. I'm not a
3 geologist.

4 Q You have heard the term?

5 A I have heard the term.

6 Q Are amphiboles asbestos minerals?

7 (OBJECTION BY ALL DEFENSE COUNSEL)

8 A Not to my knowledge.

9 Q Are amphiboles, to your knowledge, generally asso-
10 ciated with talc?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 A Not to my knowledge.

13 Q So, just to recap, do I understand your testimony to
14 be that the only asbestos mineral which, to your know-
15 ledge, is associated with talc in general is chrysotile
16 asbestos?

17 (OBJECTION BY ALL DEFENSE COUNSEL)

18 A That is correct.

19 Q That is your understanding?

20 A That is my understanding.

21 Q Was there ever research done or testing done by your
22 department to determine whether chrysotile asbestos
23 was present in talc samples given to your department
24 for analysis?

25 A Yes.

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1 Q Where, to your knowledge, did the talc come from that
2 was given to your department for such testing?

3 A Well, generally from the Emtal Plant and mine; occa-
4 sionally from competitive sources.

5 Q When you refer to the Emtal Plant and mine, can you
6 describe that for the record, what that is?

7 A Well, again, my description will be general. The talc
8 products produced by Emtal are mined underground from
9 an underground deposit and are hauled a short distance
10 to a plant where the raw ore is processed, processed
11 primarily in two respects: One with respect to changes
12 in particle size and size distribution by grinding;
13 and in some cases also by floatation, primarily to
14 remove colored impurities to improve brightness.

15 Q Is Emtal an acronym or trade name for Eastern Magnesia
16 Talc Company?

17 A I believe so.

18 Q When you say Emtal, are you referring to talc produced
19 by Eastern Magnesia Talc Company?

20 A I'm referring to talc produced by the Minerals and
21 Chemicals Division of Engelhard Corporation.

22 Q When you refer to that talc, is that only talc that's
23 produced by Eastern Magnesia Talc Company?

24 A I believe so.

25 Q Do you have some doubt about that?

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1 A There is doubt on the accuracy of my knowledge on that.

2 Q That is to say, there may be talc produced in some
3 other place or from some other mine that is marketed
4 at Emtal?

5 A I don't know. I'm not suggesting that.

6 Q You don't know? Okay. In the tests of which you're
7 aware that were run on Emtal talc, was there ever
8 found presence of chrysotile asbestos?

9 A As indicated earlier, we have found on some samples
10 from some limited areas only trace amounts, like indi-
11 vidual fibers, of chrysotile, what we believe to be
12 chrysotile-type asbestos.

13 Q When you say from some areas, to what are you refer-
14 ring?

15 A Samples picked more or less at random either in plant
16 or in mine.

17 Q Are you talking of samples of processed talc?

18 A It could be.

19 Q What else could it be?

20 A It could be samples pulled from areas of the mine.

21 Q You mean ore?

22 A Ore.

23 Q Raw ore?

24 A Right.

25 Q So, your department has tested both processed talc and

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1 raw ore from the Emtal mine for presence of chryso-
2 tile?

3 MR. HALKET: Objection. That's not what
4 he said.

5 (OBJECTION BY ALL DEFENSE COUNSEL)

6 Q Is that accurate, or is that inaccurate?

7 MR. KENNEDY: Would you like the question
8 read back? Would you read the question back, please?

9 (PREVIOUS QUESTION READ BY REPORTER)

10 A Yes, on occasion.

11 Q When you say on occasion, what is it that prompts such
12 an occasion?

13 A As I indicated earlier, we have had no continuous on-
14 going study of mineral impurities in talc. It is
15 usually -- well, it has been triggered by requests
16 from some of our research clients for such analyses.

17 Q Then who are your research clients besides Eastern
18 Magnesia Talc Company?

19 A Well, I'm referring to other departments within the
20 organization. I'm referring -- I'm only referring
21 to that. I'm not referring to organizations outside
22 of the company.

23 Q And what other departments would those be?

24 A Well, Manufacturing and Sales and Marketing.

25 Q When you say the Manufacturing Department, what does

1 that comprehend?

2 A That's the group that has the responsibility for the
3 mining and processing of the talcs that we sell.

4 Q Is that Manufacturing Department distinct from Eastern
5 Magnesita Talc Company?

6 A I don't believe so. I don't know for certain.

7 Q Who is it, to your understanding, which entity is res-
8 ponsible for the manufacturing and mining of talc at
9 the Johnson mine today?

10 A Well --

11 MR. KENNEDY: That is who individually or --

12 MR. PRENTISS: No. I said which entity.

13 MR. SLOANE: Which corporate entity?

14 MR. PRENTISS: Whatever entity.

15 A Well, I look on the Minerals and Chemicals Division as
16 an entity.

17 Q Yes, sir.

18 A And the Emtal product line is only one of several
19 product lines that the Minerals and Chemicals Division
20 mines and processes and sells.

21 MR. SLOANE: Listen to the question and
22 answer the question. That's not the question he asked.

23 THE WITNESS: Okay.

24 MR. SLOANE: Read the question back.

25 (PREVIOUS QUESTION READ BY REPORTER)

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1 A To my understanding, it is the Minerals and Chemicals
2 Division.

3 Q There is a corporation called Eastern Magnesia Talc
4 Company; is that not correct?

5 A I don't know.

6 Q Earlier in your testimony, you made reference to the
7 Emtal mine and the Emtal facility for processing talc
8 ore; do you remember that?

9 A Yes.

10 Q When you made reference to the Emtal mine, are you
11 referring to the Johnson, Vermont mine?

12 A Yes, I am.

13 Q And the Emtal facility is a facility at or near the
14 Johnson, Vermont mine?

15 A Yes.

16 Q Now, you testified that your department has tested
17 both processed talc and raw talc ore from the Emtal
18 mine for presence of chrysotile asbestos; is that
19 correct?

20 A Yes.

21 Q Has your department in its research found chrysotile
22 asbestos in both processed talc and raw ore from the
23 Emtal mine?

24 A Yes.

25 Q In your earlier answer, you referred, I believe, to

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1 the presence of chrysotile in asbestos that your
2 department found as being trace quantities. Is that --

3 A That is correct.

4 Q What do you define as trace quantities?

5 A Trace quantity is a level of a component that can be
6 qualitatively identified, but not quantitatively
7 measured.

8 Q And can you characterize that as being less than some
9 threshold percentage?

10 A Well, no. I can characterize it as an individual
11 fiber, but in terms of characterizing it as less than
12 a certain percentage, no, I cannot.

13 Q Is there a threshold percentage below which the re-
14 search materials that are available to you cannot
15 quantify as to the presence of chrysotile asbestos?

16 A Obviously, if there were less than a single fiber, we
17 would not be able to characterize -- to quantify it.

18 Q So you'll understand my question, let me give you a
19 brief explanation. I'm asking whether there is some
20 percentage below which quantification is impossible;
21 that is, less than one percent or less than five per-
22 cent or less than ten percent. Do you understand the
23 question?

24 MR. HALKET: Objection. I don't.

25 (OBJECTION BY ALL DEFENSE COUNSEL)

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1 MR. HALKET: Are you talking characterized
2 by weight or by molecule number?

3 MR. PRENTISS: Okay. I understand.

4 Q Is there any standard format by which percentage con-
5 tent of a talc, of a contaminant such as chrysotile
6 asbestos, is stated in terms of weight, molecular
7 weight, volume or the like?

8 A There are two types of tests. One can use total chemi-
9 cal analysis or x-ray diffraction, and those tests are
10 limited to identifications of perhaps one to two per-
11 cent. There is another type of test such as the elec-
12 tron microscope in which one can identify an individual
13 particle.

14 MR. HALKET: Listen to the question again
15 and answer it. That's not the answer to his question.
16 Why don't we read that question again.

17 (PREVIOUS QUESTION READ BY REPORTER)

18 A No.

19 Q In other words, if I were to tell you that I have a
20 sample of talc that contains three percent asbestos,
21 is there a standard usage in the field with which you
22 are familiar that you could determine that that three
23 percent meant three percent by weight, three percent
24 by volume? How is it commonly stated?

25 (OBJECTION BY ALL DEFENSE COUNSEL)

1 A I'm not sure that I understand your question.

2 Q How do you commonly state degree of contamination of
3 talc by some other mineral constituent?

4 (OBJECTION BY ALL DEFENSE COUNSEL)

5 A If there is sufficient there to detect it by any
6 standard methods, then a percent by weight would be
7 one way.

8 Q Is that the normal way that you would use in charac-
9 terizing a talc?

10 (OBJECTION BY ALL DEFENSE COUNSEL)

11 A If there were sufficient of the contaminant present
12 that I could express it meaningfully, yes.

13 Q You would say percentage by weight?

14 A Percentage by weight would be an acceptable method.

15 Q For example, the talc from the Emtal mine in Johnson,
16 Vermont, the processed talc is not pure talc; is that
17 correct?

18 (OBJECTION BY ALL DEFENSE COUNSEL)

19 A I think it is --

20 MR. KENNEDY: Excuse me, Dan, what do you
21 mean by pure talc?

22 MR. PRENTISS: Just that, pure talc ore.

23 MR. KENNEDY: What kind of talc are you
24 talking about?

25 MR. PRENTISS: Any of the talcs.

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1 MR. KENNEDY: If you can answer it, that's
2 what he wants.

3 A To the degree that there is basically nothing pure in
4 nature, so any ore that we would dig out of the mine
5 would contain in all probability something other than
6 the major constituent.

7 Q Does talc from the Emtal mine contain chlorite?

8 MR. HALKET: The ore or the --

9 MR. PRENTISS: Processed talc.

10 A I don't know.

11 Q Has your department ever tested processed talc from
12 the Emtal mine to determine the constituent minerals
13 in that talc?

14 A Yes, we have.

15 Q Are some of the constituent minerals -- is one of the
16 constituent minerals chlorite?

17 A I don't recall that.

18 Q You stated earlier in an answer that the x-ray diffrac-
19 tion and one other method of analysis of talc from
20 mineral constituents was limited to one to two percent;
21 do you remember that answer?

22 A Yes, I do.

23 Q When you say limited to one to two percent, what do
24 you mean?

25 A That would be one to two percent by weight.

1 Q By that answer, are you saying that those methods of
2 analyses cannot detect constituents of less than one
3 or two percent composition by weight?

4 A That is correct. It depends somewhat upon the consti-
5 tuent one is looking for, but it's in that range.

6 Q Now, one of the tests that you mentioned was x-ray
7 diffraction. What was the other test that you grouped
8 with x-ray diffraction as being limited to one to two
9 percent?

10 A I don't think I said one to two percent in that case.
11 Chemical analysis is another method of identifying
12 mineral or at least a chemical species, and from that
13 you might be able to infer what minerals were present.

14 Q And what's the limit of chemical analysis for determi-
15 nation of mineral species?

16 A That depends on the particular combination of minerals
17 that happen to be there.

18 Q You can't --

19 A I couldn't answer definitively.

20 Q But you do say that x-ray diffraction is limited to one
21 to two percent in its determination of mineral species?

22 A That is my understanding.

23 Q Has any test that has been done by your department of
24 talc from the Emtal mine found by x-ray diffraction
25 the presence of chrysotile asbestos?

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(OBJECTION BY ALL DEFENSE COUNSEL)

1 A Not to my knowledge.

2 Q Are you aware of all of the -- of the results of all
3 of the tests that have been run by your department on
4 Emtal talc?

5 A Only generally.

6 Q Would you be aware if x-ray diffraction methods had
7 determined the presence of chrysotile asbestos in talc
8 from the Emtal mine?

9 (OBJECTION BY ALL DEFENSE COUNSEL)

10 A Possibly.

11 Q Dr. Hemstock, has your department ever had outside
12 laboratories or facilities test talc from the Emtal
13 mine?

14 A Yes, on occasion.

15 Q By outside laboratories or facilities, I'm referring
16 to a business or a laboratory which is not connected
17 with your employer?

18 A That is correct.

19 Q You understand that? Your answer is that on occasion,
20 your department has sought an outside laboratory to
21 perform some sort of analysis on Emtal talc?

22 A That is correct.

23 Q To your knowledge, has any other person within your
24 company -- I'm referring to Engelhard Corporation --
25

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1 sought outside analysis on talc from the Emtal mine?

2 A Not to my knowledge.

3 Q Has any person, to your knowledge, has any person
4 within your company sought outside analysis of any
5 talc other than talc from the Emtal mine?

6 A Yes.

7 Q What was the purpose for seeking outside analysis
8 either of Emtal talc or talc other than Emtal?

9 MR. HALKET: I'm going to object to that
10 question.. It is ambiguous.

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 A The reason was that we either did not have the skills
13 to carry out the tests, or we did not have the instru-
14 mentation in-house.

15 Q What is the instrumentation that you have in-house
16 that's available for analysis of talc for mineral
17 constituents?

18 A Could you be more specific?

19 Q I'll try. Do you have laboratories at your disposal
20 within your department?

21 A Yes.

22 Q What analytical instruments do you have in your labora-
23 tories for the testing of talc for mineral constituents?

24 A Well, I mentioned x-ray diffraction.

25 Q Yes.

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1 A If the quantities of mineral present is adequate,
2 differential thermal analysis. We do have light
3 microscopes equipment for looking at particle shape,
4 although that is not a positive identification of
5 mineral species. Today we do have a scanning electron
6 microscope.

7 Q And when did you obtain the scanning electron micro-
8 scope?

9 A In 1982.

10 Q When did you obtain the x-ray diffraction facility?

11 A I don't recall.

12 Q Have you had that x-ray diffraction facility since you
13 began -- your department began the testing of Emtal
14 talc?

15 A We had it prior to that time.

16 Q Do you have a transmission electron microscope?

17 A No, we do not.

18 Q Is the x-ray diffraction machine that you have capable
19 of detecting chrysotile asbestos in talc samples if
20 such mineral were there?

21 (OBJECTION BY ALL DEFENSE COUNSEL)

22 A Only if present in sufficient quantity.

23 Q What quantity would that be?

24 A Oh, perhaps greater than five percent.

25 Q Are you aware of the state of the art analytical methods

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1 that are available for the testing for the mineral
2 constituents of talc?

3 A Generally.

4 Q Are there x-ray diffraction machines that have a finer
5 sensitivity, if that's the proper word, than the one
6 that you have?

7 A Not to my knowledge.

8 Q Do you know of a technique of analysis called electron
9 microprobe?

10 A Yes, I do.

11 Q Is that one technique that is used for detection of
12 asbestos minerals?

13 A Not to my knowledge.

14 Q Is transmission electron microscope one instrument
15 that is used for detection of mineral constituents
16 of talc?

17 A Transmission electron microscopy will measure particle
18 shape only.

19 Q Is that an important part of analysis of talc, to
20 determine its mineral constituents?

21 A It could be. It's not definitive.

22 Q When you speak of particle shape, that's what generally
23 termed morphology?

24 A Yes, that's correct.

25 Q Morphology is one of the means of determining whether

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1 certain mineral constituents are present; is that
2 correct?

3 (OBJECTION BY ALL DEFENSE COUNSEL)

4 A Yes.

5 Q When did your department or when did your company
6 first send out samples for outside analysis?

7 A I don't recall.

8 Q Was that at the very beginning of your involvement,
9 your department's involvement, in the testing of talc?

10 A I don't know.

11 Q You have no recollection of when it was that you
12 sought outside laboratory facilities?

13 A No, I don't.

14 Q Well, you stated in answer to an earlier question that
15 you sought these outside facilities to obtain ana-
16 lytical skills that weren't available within your own
17 department?

18 A Correct.

19 Q When did you first determine that your own department
20 did not have sufficient analytical skills or methods
21 to perform the tests?

22 A Oh, it was generally in the seventies. I could not be
23 more specific.

24 Q Would it have been after you had spent some period of
25 time doing your own in-house analysis?

1 A Perhaps.

2 (RECESS)

3 Q Dr. Hemstock, is it your testimony that the testing
4 of Emtal talc has found some chrysotile fibers?

5 (OBJECTION BY ALL DEFENSE COUNSEL)

6 MR. KENNEDY: When one Defendant objects,
7 it counts for everybody.

8 A No.

9 Q Has your department ever found chrysotile asbestos
10 in Emtal talc?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 A Yes.

13 Q What was the form of the chrysotile asbestos that you
14 found?

15 (OBJECTION BY ALL DEFENSE COUNSEL)

16 A It was present in trace amounts in some samples.

17 Q What was the morphology of those trace amounts that
18 you found?

19 A They were fibers.

20 Q What were the size of the fibers?

21 (OBJECTION BY ALL DEFENSE COUNSEL)

22 A Variable.

23 Q What was the maximum size that you recall?

24 A I don't recall.

25 Q What was the general range of sizes that was found?

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1 A Generally --

2 (OBJECTION BY ALL DEFENSE COUNSEL)

3 A Generally in the one micron range.

4 Q When you speak of one micron, are you referring to the
5 length of the fiber?

6 A That's correct.

7 Q Did you find any greater than one micron in length?

8 A In some samples.

9 Q Did you find any less than one micron in length?

10 A In some samples.

11 Q What generally was the range of aspect ratios of the
12 fibers that were found?

13 (OBJECTION BY ALL DEFENSE COUNSEL)

14 A I don't recall.

15 Q Dr. Hemstock, I'm going to start going through some of
16 the documents that have been provided in connection
17 with this deposition. These have been marked, and I'm
18 going to ask you just to identify them as I show them
19 to you. Showing you Plaintiff's Exhibit No. 1, can
20 you identify that, please?

21 MR. KENNEDY: Can we just get one thing
22 straight. How would you like him to identify them,
23 by date, by department?

24 MR. PRENTISS: The most succinct manner he
25 can think of to identify it so that it will be clear

1 for the record. I think that the kind of documents
2 are so diverse --

3 MR. SLOANE: Just say Plaintiff's Exhibit
4 No. 1.

5 MR. PRENTISS: What is Plaintiff's Exhibit 16

6 MR. HALKET: If you're asking him to des-
7cribe the document by reading its face and saying how
8 many pages it is, I don't have any objection to that;
9 but I want to make it clear that by so doing he's not
10 testifying to the -- that he has the knowledge suffi-
11cient to lay a foundation as to the accuracy of the
12 information in the document or its admissibility in
13 evidence. You're just asking him to read a piece of
14 paper that you've given him.

15 MR. PRENTISS: I'll be asking those ques-
16 tions about each one of the documents.

17 MR. HALKET: I just wanted to make it clear.

18 Q Do you know what that document is?

19 A Generally, yes.

20 Q Have you ever seen it before?

21 MR. KENNEDY: Well, let's just clarify this.
22 He has seen all these documents within the last two
23 days. So, why don't we assume that if he says no, he
24 hasn't seen them before, he's really meaning no, I
25 haven't seen them before they were shown to me the

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1 other day by counsel in preparation for this deposi-
2 tion. Okay?

3 MR. PRENTISS: Fine.

4 A Not that I recall.

5 Q And do you know where it came from?

6 MR. KENNEDY: That's of your own knowledge.

7 A No.

8 MR. KENNEDY: He can read the document and
9 tell where it came from.

10 THE WITNESS: Yes.

11 Q The face page of that document is a form entitled
12 "Inter-Department Memorandum, Minerals and Chemicals
13 Division." Do you recognize that form at all?

14 A Yes, that's a standard memorandum form that our divi-
15 sion uses.

16 Q Attached to the standard memorandum form is a page
17 which carries at the top the label "TSR NO.: SL 43872D."
18 What is a TSR?

19 A That's -- a TSR is a Technical Service Request.

20 Q And what is that?

21 A That is a document that is used for committing to
22 writing requests that are made by departments outside
23 of Research and Development.

24 Q By that you mean, would this be a request for analysis
25 by one of the outside laboratories that you discussed

1 earlier in your testimony?

2 A It would be a request for analyses from outside the
3 Research and Development Department, not necessarily
4 an outside laboratory.

5 Q What services outside the Research and Development
6 Department other than outside laboratories would a
7 TSR be directed to?

8 A Would you clarify the question, please?

9 Q Sure. A TSR can request a service from some person
10 other than the Research and Development Department,
11 is that --

12 A No. That's a Technical Service Request.

13 Q Yes?

14 A It's filled out by one of the requesting departments
15 outside of R & D for R & D assistance.

16 Q And so, a TSR, this TSR is something that the -- well,
17 can you tell me from looking at that, is that a request
18 that was received by the Research and Development
19 Department?

20 (OBJECTION BY ALL DEFENSE COUNSEL)

21 A Yes, I would say so.

22 Q On what basis would you say so?

23 A Mr. Triglia is a member of the Research and Development
24 Department, but the -- this form --

25 Q Now you're referring to page three of four pages of

1 Exhibit 1?

2 A That's correct.

3 Q Yes?

4 A This form would have been filled out by the requestor
5 outside of R & D.

6 Q What is page two of Exhibit 1?

7 A This is a description of the results of the tests,
8 of the analytical tests.

9 Q By whom were those tests done?

10 MR. KENNEDY: Could I just clarify one
11 point? These answers that you're getting are not
12 from the personal knowledge of Mr. Hemstock, but just
13 by his reviewing the document. Do you understand that?

14 THE WITNESS: That is correct.

15 MR. KENNEDY: He said he hasn't seen the
16 document before.

17 THE WITNESS: A general knowledge, but not
18 specific knowledge.

19 Q Are you finished with your answer?

20 THE WITNESS: Would you repeat the last
21 question, please?

22 (PREVIOUS QUESTION READ BY REPORTER)

23 Q Are you finished with your answer?

24 A Yes.

25 Q Those analytical tests would have been performed by

1 the Research and Development Department?

2 A Not entirely.

3 Q By whom else would the tests have been run?

4 A The document states the -- that the scanning electron
5 micrograph were run by a laboratory at the Georgia
6 Institute of Technology..

7 Q Would the testing by the Georgia Institute of Tech-
8 nology have been done at the request of the Research
9 and Development Department?

10 A It probably would.

11 Q Under what circumstances would it not have been?

12 (OBJECTION BY ALL DEFENSE COUNSEL)

13 A I can't recall a circumstance where it would not have
14 been.

15 Q When the Research and Development Department receives
16 a TSR, is it the customary practice of the Research
17 and Development Department to keep a copy of that TSR
18 together with whatever response was sent to the TSR?

19 (OBJECTION BY ALL DEFENSE COUNSEL)

20 A That would be normal procedure.

21 Q You testified at the deposition on January 28 that you
22 are the official within your company who has the most
23 direct control and custody over those files of the
24 company related to the Research and Development Depart-
25 ment, did you not?

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(OBJECTION BY ALL DEFENSE COUNSEL)

MR. SLOANE: Are you asking him whether
he testified to it, or whether that's true?

MR. PRENTISS: I'm asking if he testified
to it.

MR. SLOANE: The record speaks for itself.
Whether he testified to it or not is in the record.

MR. PRENTISS: Your objection is noted.

MR. KENNEDY: Do you recall what you --
first of all, do we have a copy of the record? That's
the best evidence.

MR. PRENTISS: This is not trial. This is
a deposition, and we'll hear objections. I don't want
to hear instructions; okay?

MR. KENNEDY: I understand, but it is an
unfair question to start asking him whether or not he
said something some time ago without an opportunity
for him to review it. You're not trying to play games
with him, you're trying to get facts.

Q Dr. Hemstock, do you have the question?

A I would need to review the previous testimony to be
sure of that.

Q Dr. Hemstock, are you the official within your company
who has most direct control and custody over the
records related to the Research and Development Depart-

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1 ment?

2 A I do not have direct control. The documents happen
3 to be filed by personnel, various personnel within my
4 department. I do not have direct control over them.

5 Q Who does?

6 A There has been no one designated as such.

7 Q Who has access to those records?

8 A They're accessible to members and are maintained pri-
9 marily for members of the R & D Department.

10 Q You are the head of the R & D Department?

11 A That is correct.

12 Q Are they accessible to anyone else?

13 A They could be on request.

14 Q A request to whom?

15 A It would probably be a secretary who would -- who
16 knows the file coding systems that we use, and if the
17 request were made to her and it -- and the document
18 was not kept in a -- in any special file, it would be
19 available to the requestor.

20 Q To anybody in the company?

21 A Within reason. We might require the department head
22 to indicate whether that document should be made avail-
23 able to an individual on occasion.

24 Q Who might require?

25 A The -- well, my secretary might ask me if there were

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1 any reason why such and -- so and so should not have
2 access to that file.

3 Q It would be your decision as to who should have access
4 and who should not have access; isn't that right?

5 A It could be.

6 Q Who else would have that decision?

7 A Our legal department could have that authority as well.

8 Q Who makes the decision as to who has access to the
9 documents?

10 A Normally, I would, if it were something that were con-
11 sidered non-routine.

12 Q You may on occasion consult legal counsel in making
13 your decision; is that right?

14 A On occasion, I might.

15 Q Other than that, it's your decision; is that right?

16 A Generally, that is correct, that's true.

17 Q Now, Exhibit 1 is a document that -- can you tell me
18 whether that came from the files of the Research and
19 Development Department of your company?

20 A I have no way of knowing that.

21 Q Did anybody request of you permission to remove that
22 document or any other documents from the Research and
23 Development Department?

24 MR. KENNEDY: Are you talking about the
25 documents that we've produced?

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1 MR. PRENTISS: Yes.

2 MR. KENNEDY: That was done through legal
3 counsel of Engelhard Corporation. That's how these
4 documents were gathered.

5 MR. PRENTISS: There's a question pending.
6 I'd like an answer.

7 A Yes.

8 Q Who requested of you?

9 A Our legal department.

10 Q When?

11 A I don't recall.

12 Q How long ago?

13 A Generally in the last year.

14 Q Were you requested to gather up certain documents by
15 legal counsel?

16 (OBJECTION BY ALL DEFENSE COUNSEL)

17 MR. KENNEDY: That goes to attorney-client
18 privilege. I'm going to instruct him not to answer
19 that.

20 Q Did you gather certain documents as a result of your
21 discussion with legal counsel?

22 MR. KENNEDY: I'll object to that, too.
23 That's trying to get the same information through the
24 back door.

25 (OBJECTION BY ALL DEFENSE COUNSEL)

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1 MR. PRENTISS: Are you instructing him not
2 to answer?

3 MR. KENNEDY: Yes.

4 MR. PRENTISS: Let's call up Judge Boyle.

5 (OFF-THE-RECORD DISCUSSION)

6 Q As I understand it, Engelhard Corporation, Dr. Hem-
7 stock --

8 MR. KENNEDY: Dr. Hemstock won't stipulate.
9 We'll stipulate. Is that what you were going to say?

10 MR. PRENTISS: Well --

11 MR. KENNEDY: Because he doesn't know what
12 I think you want him to stipulate to. What you want
13 to establish is some foundation for these documents.

14 MR. PRENTISS: That's right.

15 MR. KENNEDY: That they were kept in the --
16 you want to stipulate to what, now, that the documents
17 that we have produced were kept in the ordinary course
18 of business?

19 MR. PRENTISS: That's right.

20 MR. KENNEDY: That it was the course of
21 business for Engelhard to keep those documents?

22 MR. PRENTISS: That's right.

23 MR. KENNEDY: We have no problem in stipu-
24 lating to that. We cannot stipulate, and I think you
25 want us to, but we cannot stipulate at this time that

1 the events recorded on those documents were recorded
2 contemporaneously with the events.. That we cannot do,
3 not that we're not willing to, we're just unable to
4 at this time.

5 MR. PRENTISS: Will you stipulate that
6 these documents were made in the ordinary course of
7 business of Engelhard?

8 MR. KENNEDY: I think I did.

9 MR. SLOANE: Made by anyone in the ordinary
10 course of business.

11 MR. PRENTISS: That's right.

12 MR. KENNEDY: I don't see the semantic dis-
13 tinction.

14 MR. HALKET: All that we can stipulate to
15 is the fact that we found these in the files of the
16 company, and that they were company records. I don't
17 know what went through the minds of the people who
18 made them when they made them. One of the people who
19 made them is Peter Gale. You can ask him better than
20 we can, I suspect, what he did when he wrote up the
21 document.

22 MR. LEIBENSPERGER: Moreover, many of the
23 documents as I saw them were prepared by people not
24 employed by Engelhard. There's no way of Engelhard
25 or any of us sitting around the table can stipulate as

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1 to how they were prepared by them.

2 MR. PRENTISS: You will stipulate, so we'll
3 be absolutely clear, that all of these documents came
4 from the files of Engelhard Corporation?

5 MR. KENNEDY: Yes.

6 MR. PRENTISS: That the documents were kept
7 by Engelhard Corporation in the ordinary course of its
8 business, and that it was the --

9 MR. KENNEDY: Ordinary course of --

10 MR. PRENTISS: -- Engelhard's business to
11 keep those documents or keep those records in its
12 files?

13 MR. KENNEDY: Yes. That's what we did. We
14 got them --

15 (OFF-THE-RECORD DISCUSSION)

16 MR. PRENTISS: Can we add Mr. Kennedy's
17 last statement. We're stipulating as an ancillary
18 part of the regular course of business of Engelhard
19 Corporation, it kept these records.

20 MR. KENNEDY: It kept records.

21 Q So, to go back to Exhibit 1, Dr. Hemstock, do you have
22 any idea as to page four of Exhibit 1 what the original
23 of that stated?

24 A No, I do not.

25 Q Dr. Hemstock, was it the practice of the Research and

1 Development Department to prepare reports such as
2 that which appears as page two of Exhibit 1 in res-
3 ponse to a TSR such as this?

4 A Generally, yes.

5 Q When you say generally, why do you add the qualifier?

6 A Because some TSR's are very, very brief, and sometimes
7 one sentence or one line. That's really what this
8 space is for, to record results, and many times the
9 results can all be encompassed within that page. This
10 happened to be one that required more space, and,
11 consequently, received a separate page.

12 Q So, the practice within the Department would be either
13 to provide the response to the TSR on that form which
14 is at page three of Exhibit 1 below the line labeled
15 "Results of Tests," and if the results of the tests
16 required greater elucidation, an additional page would
17 be provided such as is shown as page two of Exhibit 1;
18 is that correct?

19 A That is correct.

20 Q Exhibit 2 I'd like to hand you at this time. Is that
21 another TSR form?

22 A There is no TSR form in this document.

23 Q Had you ever seen Exhibit 2 prior to preparation for
24 this deposition?

25 A Not that I recall.

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1 Q Do you know whether this document came from the files
2 of the Research and Development Department?

3 A No, I don't.

4 Q Who is Mr. Michael Zimmermann?

5 A Mr. Michael Zimmermann is the Product Manager for the
6 Emtal product line.

7 Q What is x-ray fluorescence analysis?

8 A X-ray fluorescence analysis is a technique for iden-
9 tification of the chemical elements present in a
10 mineral ore or a product.

11 Q Is x-ray fluorescence analysis distinct from x-ray
12 diffraction?

13 A Yes, it is.

14 Q Is x-ray fluorescence analysis a means for testing for
15 presence of asbestos mineral in a sample of talc?

16 A No, it is not.

17 Q Did your department request the B.F. Goodrich Company
18 to perform tests on talc samples for presence of as-
19 bestos?

20 A Not to my knowledge.

21 Q What is Exhibit 3?

22 A This is a Technical Service Request.

23 Q From whom?

24 A The document suggests it's from Mr. Shafer.

25 Q To whom is it addressed?

1 A It's addressed to Mr. Triglia and myself.

2 Q And what is the request?

3 A The -- well, the request is to determine the presence
4 of asbestos-form particles or free silica in four
5 samples of mine rock waste.

6 Q Do you recall that TSR?

7 A No, I do not.

8 Q You don't recall receiving that?

9 A No, I do not.

10 Q Was there a report that was rendered as a result of
11 that TSR?

12 A The report is attached to this document.

13 Q Do you know who wrote the report that is attached to
14 the TSR? I'll show it to you, if you like.

15 A No, I cannot tell.

16 Q And what's the date of the TSR?

17 A The date it was initiated was February 28, 1973.

18 Q And can you determine what the date of the response
19 is?

20 A Well, the response date at which the report was com-
21 pleted according to this document is June 12, 1973.

22 Q Did that TSR entail a request by your department for
23 outside laboratory analysis?

24 MR. KENNEDY: Dan, doesn't the report speak
25 for itself? I mean, he's only reading it.

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1 A Yes, that's what the report would suggest.

2 Q Now showing you page three of Exhibit 3, there is a
3 table. Can you tell me whether -- can you tell me
4 if this table represents the results of the in-house
5 analysis that was done in response to the TSR?

6 A I can't answer that with certainty.

7 Q Do you know whether in-house analysis was done in res-
8 ponse to this TSR?

9 A I don't know with certainty.

10 Q Was it the regular practice of your department to pre-
11 pare a report such as is included in response to the
12 TSR such as is shown on page one of Exhibit 3?

13 A Well, page one indicates the report is attached, and
14 that's what these are, attachments. So, that would
15 be normal.

16 Q That would be the normal practice?

17 A That's correct.

18 Q Would it be normal practice to write up this report
19 at the conclusion of the studies that made up the re-
20 port?

21 A I should think so.

22 Q Now, page three of this report contains a table. On
23 the table is a line item that states "Number Asbestos
24 Fibers Counted," and there's an asterisk which refers
25 to the statement, "Based on a total particle count of

1 five hundred." The number asbestos fibers counted
2 under the four columns are three, four, three, and
3 eight respectively. Is that what you referred to
4 earlier as being trace quantities?

5 (OBJECTION BY ALL DEFENSE COUNSEL)

6 A Without a detailed study of the Johns-Manville report,
7 I couldn't comment.

8 Q Is the Johns-Manville report appended to this document?

9 A Yes, it is.

10 (RECESS)

11 Q Dr. Hemstock, is 1.6 percent asbestos as a constituent
12 of a talc sample what you would consider trace quantity?

13 A I would --

14 (OBJECTION BY ALL DEFENSE COUNSEL)

15 A I would consider -- no, it is not.

16 Q That's greater than trace quantity?

17 A Yes.

18 Q Did you receive -- do you recall whether you received
19 this TSR at the time that it was issued?

20 A No, I do not.

21 Q Was it normally the case that when a TSR would be given
22 to your department that you would see that TSR?

23 A No, I would not normally see it.

24 Q And would you normally only see it if it had your name
25 on it?

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1 A If it were addressed specifically to me, I would, in
2 all probability, I would see it.

3 Q Now, this TSR is addressed specifically to you; is
4 that right?

5 A And to Mr. Triglia.

6 Q Yes.

7 A Who is in my department.

8 Q Under normal circumstances, would you have read that
9 at the time that you received it?

10 A I might have scanned it and passed it along to Mr.
11 Triglia.

12 Q Who is Mr. Triglia?

13 A Mr. Triglia was the group leader of physical measure-
14 ments at that time.

15 Q And what was your position at that time?

16 A I was Director of Research.

17 Q Before you became a Vice President?

18 A That's correct.

19 Q Now, where a TSR carried your name as one of the ad-
20 dressees, would you normally read the response that
21 was ultimately given to that TSR?

22 A I might.

23 Q Under what circumstances would you read the response?

24 A I think that the subject matter or my own personal
25 interest, if I wanted to -- if I had a general interest

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1 in that area, I might read it.

2 Q In this case, the request, the TSR request is to
3 determine whether or not there is asbestos or asbesti-
4 form particles or free silica in certain ore samples
5 that were submitted with the TSR; is that correct?

6 A That's what the document says.

7 Q Would that be a matter that you would consider of
8 personal interest to you, whether or not there was
9 asbestos in any of those ore samples?

10 A I might have had general interest, but not particularly
11 high interest in that at that particular time.

12 Q Those ore samples came from -- is it apparent from
13 that document where those ore samples came from?

14 A Yes, to the degree that the subject matter is Emtal
15 mine waste rock, I would have to believe they came
16 from the Emtal mine.

17 Q In 1973, at the time that TSR was prepared, were you
18 aware of any hazardous propensities of asbestos?

19 (OBJECTION BY ALL DEFENSE COUNSEL)

20 A In a general sense, yes.

21 Q Was it a matter of any concern to you personally or
22 professionally whether any of the ore that was asso-
23 ciated with the Emtal talc mine contained asbestos?

24 (OBJECTION BY ALL DEFENSE COUNSEL)

25 A In general terms, yes.

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1 Q Looking at that document, do you have any -- does
2 that refresh any recollection of yours whatsoever as
3 to the events that are portrayed in the document?

4 A No, it does not.

5 Q Do you remember the first time that you learned of
6 a test result that found asbestos of any type in
7 Emtal talc or Emtal talc ore?

8 (OBJECTION BY ALL DEFENSE COUNSEL)

9 A I couldn't identify such time.

10 Q Was that a matter of some significance to you?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 A Would you clarify the question, please?

13 Q You were aware generally in 1973 that asbestos was
14 known or suspected to have hazardous health properties,
15 weren't you?

16 A Generally, yes.

17 Q And would it not have been a matter of concern to you
18 having that knowledge of asbestos if you were to learn
19 that some of the talc that was produced by your com-
20 pany may come from ore that was associated with asbes-
21 tos?

22 A Perhaps.

23 Q Perhaps?

24 A To the degree that I was generally aware that asbestos
25 was a very minor constituent of talc, generally, yes.

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1 Q Well, is it your opinion that as a very minor consti-
2 tuent of talc, generally asbestos does not pose a
3 health hazard?

4 (OBJECTION BY ALL DEFENSE COUNSEL)

5 MR. KENNEDY: I'm going to not only object,
6 but I'd like to remind you that Engelhard is not a
7 party to this. This is a discovery deposition, and
8 I think your question is argumentative when you really
9 have no cause to be argumentative with this witness.
10 It's a discovery deposition. That's it.

11 Q Can you answer the question?

12 THE WITNESS: Would you repeat the question,
13 please?

14 (PREVIOUS QUESTION READ BY REPORTER)

15 A That is my general belief.

16 Q On what do you base that belief?

17 (OBJECTION BY ALL DEFENSE COUNSEL)

18 A Really on the basis of evidence that we have developed
19 over the past several years. The quantities of as-
20 bestos in general that we have seen are below the
21 level that I would consider to be potentially hazardous

22 Q What is the level, what is that level that you just
23 referred to?

24 (OBJECTION BY ALL DEFENSE COUNSEL)

25 A This is a qualitative judgment on my part. I think the

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1 levels that are considered hazardous is very much a
2 controversial issue, so I stand by the fact that
3 qualitatively I believe they are below, in my judgment,
4 are below the levels that are to be considered hazard-
5 ous.

6 Q What in your judgment is a level at which contamination
7 by asbestos would be considered hazardous?

8 (OBJECTION BY ALL DEFENSE COUNSEL)

9 A I think speaking again very generally without the
10 professional knowledge as an epidemiologist, probably
11 of the order of percents --

12 Q Of the order of percents?

13 A Well, let's say two to five percent.

14 Q Two to five percent?

15 A Speaking as a -- I'm speaking now as a layman in that
16 area rather than a professional.

17 Q Thank you. I'll show you Plaintiff's Exhibit 4 for
18 this deposition. What is that, Dr. Hemstock?

19 A This is a Technical Service Request.

20 Q And do you have any recollection of ever having seen
21 that before other than through counsel?

22 A No, I do not.

23 Q Is there a report attached to that TSR?

24 A Yes, there is. It's a similar form to those we have
25 previously looked at.

1 Q As with the other TSR's, was that a form that was
2 customary for your department to prepare in response
3 to such a TSR?

4 A Yes, it was.

5 Q Who is Mr. Marchetti?

6 A Mr. Marchetti was the Manager of Technical Service at
7 that time.

8 Q Now, the bottom of this TSR, there's a series of ini-
9 tials after the line "Copies to." Can you identify
10 who those initials belong to?

11 A Yes, I can.

12 Q Could you do so?

13 A This one is myself.

14 Q You're referring to "GAH"?

15 A That is correct. "EWA" refers to Dr. E.W. Arnold.

16 Q Who is that?

17 A He was a Director of Research at this time.

18 Q Who is "WSS"?

19 A "WSS" is W.S. Stoy, and he is a group leader of indus-
20 trial products, Technical Service.

21 Q Who is "EJT"?

22 A That "EJT" is E.J. Triglia who was the Manager of
23 Analytical and Physical Measurements at that time; and
24 "JVK" refers to Dr. James V. Kennedy who was also a
25 Director of Research at that time.

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1 Q Those initials indicate that you, among these other
2 people, received a copy of this TSR?

3 A That's what those initials would normally indicate.

4 Q Does that also indicate that you received a copy of
5 the report that was prepared in response to the TSR?

6 A That would be normal procedure.

7 Q And the document shows that it was assigned to a Mr.
8 F.J. -- and I'll ask your help?

9 A Dzierzanowski.

10 Q Who is that?

11 A Mr. Dzierzanowski is or was at that time group leader
12 of Physical Measurements.

13 Q Would he be the person who would have prepared the
14 report that is appended to this TSR?

15 A It would in all probability be someone in his group
16 rather than he himself.

17 Q Could you tell me what is Exhibit 5?

18 A I cannot identify this document.

19 Q You've never seen Exhibit 5 before?

20 A Not to my knowledge.

21 Q The title of this paper is "Proposed Experimental
22 Design for Fiber Distribution," and the date of the
23 second page of this document is 4/15/1970. Do you know
24 whether there was concern within your department as of
25 4/15/70 regarding identification of fiber contamination

1 of talcs that were produced and sold by your company?

2 A I don't know that.

3 Q Is there today?

4 (OBJECTION BY ALL DEFENSE COUNSEL)

5 A I think I've testified earlier the fact that I per-
6 sonally, and I believe the division, believe that the
7 level of asbestos minerals present in our talcs is at
8 a non-hazardous level.

9 Q When did it first concern you to determine what the
10 fiber levels of your talcs were?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 MR. PRENTISS: Let me restate that ques-
13 tion.

14 THE WITNESS: Yes, if you would, please.

15 Q When was it that you first decided to determine the
16 fiber levels of your talc?

17 A I personally did not make that decision.

18 Q Who did?

19 A We -- the Research Department was responding to re-
20 quests from Marketing, Sales and Manufacturing, and
21 if they requested that we carry out such determinations
22 we did, or attempted to.

23 Q You don't recall when that first request was?

24 A No, I do not.

25 Q And was it communicated to you what the reason for that

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1 request was?

2 A I don't recall the circumstances.

3 Q Do you know whether there was any concern over possible
4 health hazards involved with the talc?

5 A I can't definitively respond. I don't know.

6 Q You simply don't know?

7 A I don't know.

8 Q Do you know what Exhibit 6 is?

9 A This is a Technical Service Request.

10 Q Have you ever seen that before, prior to preparation
11 for this deposition?

12 A Not that I recall.

13 Q It's the same format of Technical Service Request
14 together with responding studies that was the normal
15 course of your department to prepare?

16 A Yes, it was.

17 Q To receive and prepare?

18 A Yes, it was.

19 Q Now, the TSR is addressed to Mr. Marchetti again?

20 A That is correct.

21 Q Underneath that is a notation of the market, rubber.
22 What does that mean?

23 A I could only speculate.

24 MR. KENNEDY: Don't.

25 A I don't know.

1 Q And what generally is that blank that's labeled
2 "Market" used to denote?

3 A That is put in by the requestor if he knows what the
4 market is. That would normally be put in that form by
5 the requestor.

6 Q What do you mean by the market?

7 A Well, if it were petroleum or paper or plastics or
8 paints, those would be all markets.

9 Q That would be the general industry to which your com-
10 pany was selling talc?

11 A I believe so.

12 Q So, is it your understanding that in the usage of these
13 documents that the designation "Rubber," for example,
14 would mean that this request, this Technical Service
15 Request, had to do with talc sales in the rubber in-
16 dustry by your company?

17 (OBJECTION BY ALL DEFENSE COUNSEL)

18 A I don't know that specifically.

19 Q Do you know that -- when you say you don't know that
20 specifically, was that the usage to your understanding,
21 the common usage of that designation "Market" on a
22 TSR?

23 A The normal procedure would be to indicate the market
24 in that particular box on the form.

25 Q Again, by market we're talking about that industry to

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1 which your company was selling talc?

2 MR. KENNEDY: Well, excuse me. I've got to
3 object if it's in reference to this document because
4 this document shows the product involved is rubber.
5 It's not the rubber industry, but it's a very specific
6 portion, I believe; balloons.

7 Q I'm asking with respect to the usage of these TSR
8 forms. Do you have the question or would you like it
9 read?

10 THE WITNESS: Would you repeat it, please?

11 (PREVIOUS QUESTION READ BY REPORTER)

12 A Could you elaborate on that question? I don't under-
13 stand that question.

14 Q Did your company sell talc to the rubber industry?

15 A I don't know that.

16 Q Does your company sell talc to the paint industry?

17 A I don't know that.

18 Q Does your company sell talc to the ceramics industry?

19 A I don't know that.

20 Q What do you know about whom your company sold talc to?

21 A The only thing that I know specifically is that we
22 sold talc to the paper industry on a limited basis
23 for pitch control.

24 Q That's the only thing you know specifically?

25 A That's the only thing I know for certain.

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1 Q For all you know, that's the only talc your company
2 sold?

3 A No, I couldn't say that. I know that all of the talc
4 we sell doesn't go to the paper industry.

5 Q You just have no idea to whom else it's sold besides
6 the paper industry?

7 A That's correct.

8 Q No idea whatsoever?

9 A No.

10 Q Have you answered the question?

11 A I know in general terms that we do sell talc to a
12 variety of industries. It is outside my province to
13 know in more detail than that.

14 Q Now, this TSR has your initials down at the bottom,
15 also, doesn't it?

16 A That's correct.

17 Q Your initials -- first of all, this is Exhibit 6. Up
18 at the top of this TSR, there's a series of initials
19 as well as down at the bottom; is that correct?

20 A Yes, that's correct.

21 Q At the top, who are the recipients designated as by
22 those initials?

23 A This portion of the form, from here down to where this
24 signature is --

25 Q Now, you're referring just for the record to the top

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1 of this uppermost box on this form, just beneath the
2 capital letter designation "Technical Service Request";
3 is that right?

4 A That is correct.

5 Q From that point down to the end of the box that appears
6 at about two-thirds down the page, you're referring
7 to that as the upper part of the request?

8 A That is correct.

9 Q Now, go ahead and finish your answer.

10 A That portion of the Technical Service Request was
11 filled out by the requestor.

12 Q Yes?

13 A In this case, Mr. Zimmermann. These people who re-
14 ceived copies were designated by him to receive them,
15 and they would have some interest, no doubt, in this
16 particular Technical Service Request.

17 Q Now, down at the bottom in the box beginning at two-
18 thirds of the way down the page to the end, there's
19 another entry for "Copies to"; is that right?

20 A That is correct.

21 Q Your initials appear in that entry; is that correct?

22 A That is correct.

23 Q They don't appear at the top?

24 A That is correct.

25 Q Who makes a determination as to who is to receive the

1 copies of the report as designated in the bottom part
2 of that page?

3 A That judgment would normally be made by Mr. Marchetti,
4 the man to whom the Technical Service Request was ad-
5 dressed.

6 Q Did you have any policy within your department that
7 you were to receive copies of all reports that dealt
8 with asbestos in talc?

9 A In general, I have -- am to receive copies of all
10 Technical Service Requests. They pass my desk as
11 indicated earlier.

12 Q The question is: Did you have a policy, any particular
13 policy, with respect to reports that dealt with asbes-
14 tos?

15 A No, I did not.

16 Q None whatsoever?

17 A None whatsoever.

18 Q Have you had a chance to look through Exhibit 6 at all?

19 A No, I have not.

20 Q And would you do so? Having reviewed that Exhibit
21 No. 6, does that refresh your recollection in any way
22 as to that TSR and the accompanying report?

23 A No, it does not.

24 Q You have no recollection of that at all?

25 A No, I have not.

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1 Q Let me just ask you one question in general. You've
2 looked through these reports in preparation for this
3 deposition?

4 A That's correct.

5 Q Do you have any recollection of any of them?

6 A Some of the more recent ones that we have received
7 or some in which I was directly involved, I could
8 identify. I have -- I receive across my desk each
9 day probably forty to fifty documents, and it's im-
10 possible to remember specifically details of each one.

11 Q How many of those documents deal with asbestos?

12 MR. SARLI: What documents now?

13 A Are you referring to the ones that cross my desk each
14 day?

15 Q That's right.

16 A A miniscule number.

17 Q Is it pretty rare?

18 A Yes, it is relatively rare.

19 Q I show you Exhibit 7. Do you have any recollection
20 of that, Dr. Hemstock?

21 A No, I don't.

22 Q Who is Mr. Peter Gale?

23 A Mr. Peter Gale was a geologist mineralogist.

24 Q Did he ever have any relationship with Engelhard
25 Corporation?

1 A Yes, he did.

2 Q What was that relationship?

3 A He was a project leader in the Research Department.

4 Q To whom did he report?

5 A He reported to Mr. Dzierzanowski.

6 Q And what was his -- what were his duties in his
7 capacity as a project leader?

8 A His role was to carry out tests in the Physical Mea-
9 surements area in response to whatever requests came
10 in.

11 Q When was he hired?

12 A I don't recall exactly. It was in the late seventies.

13 Q Did you participate in the decision to hire him?

14 A I probably did.

15 Q Where was he located while an employee of Engelhard?

16 A He was located in Menlo Park.

17 Q If you'll read the handwritten notation that's on
18 page two of that Exhibit No. 7 -- first, can you tell
19 me if you recognize the handwriting?

20 A No, I do not.

21 Q That handwriting suggests that Mr. Gale at the time
22 of preparation of that report was in Georgia; is that
23 correct?

24 (OBJECTION BY ALL DEFENSE COUNSEL)

25 A He would not have been located in Georgia. He may

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1 have gone to Georgia Tech to observe the running of
2 these samples.

3 Q Was that a regular part of Mr. Gale's duties when he
4 worked for Engelhard?

5 A I would say so.

6 Q He, as a regular part of his duties, would go to
7 Georgia Tech to either observe or to run tests himself?

8 A He was far down in the learning curve at this time,
9 and he went to Georgia Tech primarily to learn. He
10 did not necessarily accompany every sample that went
11 to Georgia Tech.

12 Q When you say he went to Georgia Tech primarily to learn,
13 was he down there for some extended period of time?

14 A Probably during the duration of running the samples
15 that he had requested to be run.

16 Q Was Mr. Gale hired for any particular field of research
17 or analysis within your department?

18 A Well, he was the mineralogist. Other than the profes-
19 sional skills that he brought with him, no.

20 Q Was he hired with the idea that he would spend some
21 substantial portion of his time in analyzing materials
22 for asbestos content?

23 A No, he was not.

24 Q That was not any part of his job?

25 A No, it was not. He was not hired for that reason.

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1 Q This handwritten notation states that Mr. Gale informed
2 the writer that some chrysotile particles were iden-
3 tified during the analysis. Does that finding strike
4 any recollection of yours at all?

5 (OBJECTION BY ALL DEFENSE COUNSEL)

6 A No.

7 Q You have no recollection of the analysis that Mr. Gale
8 did that is memorialized in Exhibit 7?

9 A No.

10 Q None whatsoever?

11 A No, I do not.

12 Q The subject matter of this Exhibit 7 is Sample REL-79-1.
13 Can you tell me what that code means?

14 A This would be a code that was applied by the Manufac-
15 turing Department. I have no knowledge of what speci-
16 fically it refers to.

17 Q Does the Manufacturing Department have a code by which
18 -- a standard code that it uses to identify samples?

19 A Not to my knowledge.

20 Q So, REL has no significance to you whatsoever?

21 A Other than the fact that the initials correspond to
22 the initiator of the request, no, it does not.

23 Q This is a standard TSR form?

24 A That's correct.

25 Q Now, was it standard practice that the response to the

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1 TSR forms would be handwritten as opposed to typed?

2 A No, it was not.

3 Q Now, this TSR is labeled "ASAP, Please Rush." Do you
4 see that up there at the top?

5 A Yes, I do.

6 Q Was that the standard request that a TSR would carry
7 about it?

8 A Not standard.

9 Q That was unusual?

10 A It depended upon the rate of response that the requestor
11 expected he was going to get. There were some people
12 who always put "ASAP" or "Rush" on whether they needed
13 it tomorrow or whether they needed it a month from now.
14 There were others who would do it in a routine basis.
15 The standard policy was first in, first out.

16 Q And was it standard policy that a request, a TSR that
17 dealt with asbestos, would carry the "Rush" or "ASAP"
18 notation?

19 A No, it was not.

20 Q This form, Exhibit 7, and the attached report, that
21 was the standard practice of the company to prepare
22 that kind of form and that kind of report in response
23 to it?

24 A It would be unusual to have this much handwritten in-
25 formation placed on the form. Normally, these come in

1 in a typewritten fashion; but as I testified earlier,
2 the upper two-thirds of the document is filled out by
3 the requestor.

4 Q Is it your testimony, then, that these handwritten
5 notations in the upper half of the TSR were placed in
6 there by the requestor?

7 A I don't know.

8 Q For example, the date of the TSR is January 29, 1979?

9 A That's correct.

10 Q Now, there's a notation "Request and Sample to P. Gale
11 2-5-79"?

12 A That's correct.

13 Q Would that suggest that this was written on by one of
14 the persons who received this TSR?

15 (OBJECTION BY ALL DEFENSE COUNSEL)

16 A I can't --

17 MR. CURRAN: I'm going to object to the
18 whole line of the questions. What is the relevance or
19 materiality? The man left the shop in '76.

20 MR. HALKET: I would also like to make an
21 objection to this kind of question and the previous
22 questions that were drawn before this where the counsel
23 for the Plaintiff is essentially asking the witness to
24 read things from a document which he did not identify
25 and which he does not remember. He's just reading words

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1 from a piece of paper. Counsel for the Plaintiff can
2 read those words just as well as the witness can, and
3 has exactly the same force in testimony.

4 Q Who is G. Huff?

5 A G. Huff was the Manager of Plant Technical Service at
6 that time. He was a member of the Research Department.

7 Q Your initials appear at the bottom portion of this
8 TSR?

9 A That's correct.

10 Q Do you recognize Exhibit 8?

11 A No, I do not.

12 Q Can you tell me what Exhibit 9 is?

13 A No, I cannot, other than the document speaks for it-
14 self.

15 Q The first page of this document on any kind of a form
16 that's used by your company?

17 A This is not a familiar form to me.

18 Q Let's go through the names. First, it is addressed to
19 a Mr. Dennis L. Caputo. Do you know who that is?

20 A No.

21 Q Have you ever heard of R.A. Nadkarni?

22 A No, I've never heard of him.

23 Q Have you ever heard of the persons who are listed as
24 receiving copies of this document at the bottom of the
25 page; R.I. Botto?

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1 A No, I am not.
2 Q J.B. Cooper?
3 A No, I'm not.
4 Q J.H. Karchmer?
5 A No, I'm not.
6 Q R.B. Williams?
7 A No, I'm not.
8 Q You've never seen this document before in your life?
9 A No, I have not.
10 Q Would you take a look at Exhibit 10? Have you ever
11 seen that before?
12 A No, I have not.
13 Q Who again is Mr. Oulton?
14 A Mr. Oulton was at that time in the Physical Measurement
15 Group.
16 Q Physical Measurements Group of the Research and Develop-
17 ment Department?
18 A Yes.
19 Q Of Engelhard?
20 A Yes.
21 Q Did he report to you?
22 A No, he did not.
23 Q To whom did he report?
24 A He reported to my predecessor who was the Vice Presi-
25 dent of Research at that time.

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1 Q What was your position at this time?

2 A That was 1972?

3 Q Yes.

4 A I was Director of Research.

5 Q And was it your company's practice to utilize Johns-
6 Manville as an outside laboratory for analysis of
7 asbestos materials?

8 (OBJECTION BY ALL DEFENSE COUNSEL)

9 A Not a practice.

10 Q Did you ever do it, to your knowledge?

11 A Not to my knowledge.

12 Q Not to your knowledge?

13 A Not to my knowledge.

14 Q You have no knowledge derived from any source that
15 your company ever sent materials to Johns-Manville
16 for testing for asbestos content?

17 A No, I do not.

18 Q Look at Exhibit 11, please.

19 A Yes.

20 Q Have you ever seen that before?

21 A I'm generally familiar with it.

22 Q What is it?

23 A This is a summary paper that was written by Mr. Oulton
24 for a talc symposium.

25 Q What is Mr. Oulton's training?

1 A What is his training?

2 Q Yes.

3 A He's a physical chemist, but has a -- or had a great
4 many years of experience, and I would say in the lat-
5 ter part of his career was a mineralogist more than a
6 physical chemist.

7 Q Would you look at Exhibit 12 and tell me whether you
8 have ever seen that before?

9 A No, I have not.

10 Q Is that a standard form that's used within your com-
11 pany?

12 A I can't identify it as such. It appears so.

13 Q It carries the name Eastern Magnesia Talc Company?

14 A That's correct.

15 Q Johnson operations?

16 A That's correct.

17 Q Would this be the Eastern Magnesia Talc Company that
18 owns the mine in Vermont?

19 (OBJECTION BY ALL DEFENSE COUNSEL)

20 A I believe so.

21 Q Showing you Exhibit 13, do you know what that is?

22 A Generally, yes.

23 Q And what is it?

24 A This was a request made by Mr. Oulton who was in the
25 R & D of the Minerals and Chemicals Division for an

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1 electron microscope evaluation of a sample by the
2 head of the electron microscope lab at Engelhard
3 Industries Division.

4 Q Do you have any independent recollection of that
5 document?

6 A No, I do not.

7 MR. SARLI: What number is this again,
8 please? I'm sorry.

9 MR. PRENTISS: 13.

10 Q Did that come to your attention at the time it was
11 prepared?

12 A I don't know.

13 Q Do you know what Exhibit 14 is?

14 A Generally, yes.

15 Q Had you ever seen that before, prior to preparation
16 for this deposition?

17 A I don't recall.

18 Q You never recall seeing that?

19 A No, I don't.

20 Q It carries your name at the bottom as a recipient of
21 it?

22 A Of a copy of it, yes.

23 Q I show you Exhibit 15. Have you ever seen that before?

24 A No, I have not.

25 Q You have no recollection of ever having seen that?

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1 A No, I have not.

2 Q Do you know whether that was in the files of the
3 Research and Development Department at your corpora-
4 tion?

5 A I don't know.

6 Q Exhibit 16, I'm handing you, and is that something that
7 you've seen before?

8 A I don't recall.

9 Q Can you state what Exhibit 17 is?

10 A This was a Technical Service Request made by Mr. Yunko
11 for determination of asbestos particles in food and
12 drugs.

13 Q Do you have any recollection of that document?

14 A No, I do not.

15 Q You were the recipient of that, is it?

16 A That's correct.

17 Q Did you prepare the report?

18 A No, I did not.

19 Q Do you know who did?

20 A The assignment was made to Mr. Triglia. I don't know.

21 MR. HALKET: I'm going to just have a
22 standing objection to instances where it is the case
23 that the witness is testifying by reading the document
24 as opposed to his own personal knowledge.

25 MR. PRENTISS: Fine.

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1 Q Who is Mr. Yunko?

2 A Mr. Yunko was the Director of Sales and Marketing for
3 the Minerals and Chemicals Division at that time.

4 Q I'll ask you to look at Exhibit 18. Do you have any
5 recollection of that?

6 A I don't recall this document.

7 Q Now, that document makes reference to a meeting with
8 Glenn Hemstock and Emil Triglia on Friday. The date
9 of this memorandum is May 31, 1979. Do you have any
10 recollection of a meeting that's referred to?

11 A Only in general terms.

12 Q What is your recollection?

13 A This was a meeting that was held to generally review
14 some of the test results that had been carried out
15 during that time on the analysis of talc samples and
16 air dust samples.

17 Q This is analysis for content of asbestos?

18 A Well, really the -- it was broader than that. It was
19 to determine mineralogical content, asbestos or as-
20 bestiform minerals being one.

21 Q Did the Research and Development Department ever under-
22 take a specific study that was not so much in response
23 to a TSR, but a study on its own to determine asbestos
24 or mineral content of talc?

25 A There was a general study, a short-term research study,

1 to get a better understanding of the mineralogical
2 content of our talc, not specifically aimed at asbes-
3 tos.

4 Q When did that take place?

5 A Approximately in the 1978-79 period.

6 Q Who conducted that study?

7 A The study was carried out by people within the Research
8 Department. Mr. Gale, Mr. Dzierzanowski, Mr. Triglia
9 were some of the people involved.

10 Q And were you involved as well?

11 A To the degree that I and Mr. Gale visited the Emtal
12 Plant and mine, that was the only direct involvement
13 I had.

14 Q Was the study generally undertaken under your super-
15 vision?

16 A Generally under my supervision, yes.

17 Q Did you review the results of the study from time to
18 time during the course of the study?

19 A From time to time, yes.

20 Q Is the meeting that's made reference to on Exhibit 18
21 a meeting that was held in connection with that study?

22 A I believe a part of it was.

23 Q A part of what? I'm not clear on your answer, sir.

24 A Our study was aimed at looking at various Emtal pro-
25 ducts. It did not involve looking at competitive

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1 samples, and as evidenced by this document, there
2 were competitive samples included.

3 Q There were competitive samples that were considered
4 at the meeting that's referenced in this document;
5 is that your testimony?

6 (OBJECTION BY ALL DEFENSE COUNSEL)

7 A Yes, that's correct.

8 Q In paragraph three of this document, there's a refer-
9 ence to Vermont talcs, Vertal. What does Vertal refer
10 to?

11 A I believe that's -- would be a sample.--

12 (OBJECTION BY ALL DEFENSE COUNSEL)

13 A --of a competitive product.

14 Q When you say a competitive product, that's a product
15 made by some company other than --

16 A Other than Engelhard.

17 Q Do you know what company is associated with Vertal?

18 A I believe that would be the Vermont Talc Company.

19 Q Do you know if that's still the name of the company?

20 A No, I do not.

21 Q There's a reference here to W.C.D. in caps with
22 periods after each of those initials. Do you know
23 what that refers to?

24 A I would assume that was also another -- I believe that
25 was another competitor.

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1 Q Would that be Whittaker, Clark & Daniels?

2 (OBJECTION BY ALL DEFENSE COUNSEL)

3 A I believe that's true.

4 Q Now, there's a reference down here to Windsor. To
5 what does Windsor refer?

6 A That also, I believe, is a competitive product.

7 Q Would that be associated with Windsor Minerals, Inc.?

8 A I believe so.

9 Q Is it your testimony that the tests that are made
10 reference to in this exhibit -- let me ask you: What
11 tests were being referred to?

12 MR. KENNEDY: Referring to what's contained
13 in the exhibit?

14 MR. PRENTISS: That's correct.

15 A The tests are not specifically defined in this docu-
16 ment.

17 Q Do you have any recollection of what tests were being
18 referred to?

19 A I do not know.

20 Q I'll show you Exhibit 19. Have you ever seen that
21 before?

22 A No, I have not seen this document.

23 Q Is it addressed to Mr. Dzierzanowski?

24 A That is correct.

25 Q Do you know whether that is a report to Mr. Dzierzanow-

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1 ski from an outside testing laboratory of tests that
2 he requested?

3 A I believe so.

4 Q Did you ever see the results of this test that's re-
5 ported on Exhibit 19?

6 A I can't recall.

7 Q There's reference to samples. The samples are num-
8 bered R 72-77B and R 191-77A. Do you know what those
9 sample numbers refer to?

10 A Yes. I can describe generally what those are.

11 Q What are they?

12 A We maintain a log book for all samples that are re-
13 ceived by the Research Department, and the "R" stands
14 for received sample. The number, the second number,
15 refers to the number of samples that we received in
16 that calendar year, and the calendar year is indicated
17 by the third digit, third set of digits.

18 Q What is the final initial?

19 A That would merely indicate two samples received at the
20 same time.

21 Q So, Sample R 72-77B, by your testimony, would be part
22 two of the seventy-second sample received by your
23 department during 1977?

24 A That would be my judgment.

25 Q R 191-77A would be part one of the one hundred ninety-

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1 first sample received by your department during 1977?

2 A That would be my judgment.

3 Q Do you know whether the test results which are por-
4 trayed in Exhibit 19 were ever embodied in any kind
5 of a report prepared by the department?

6 A I do not know that for a fact.

7 Q Would it be the normal course of business of your
8 department to incorporate test results received by
9 outside laboratories as a part of a department re-
10 search report?

11 A Yes, it would.

12 Q I show you Exhibit 20. Have you ever seen that
13 before? Do you have any recollection of it? That's
14 two questions. Do you have any recollection of that?

15 A No, I do not recall this document.

16 Q Now, this document is an inter-department memorandum
17 of the Minerals and Chemicals Division. That means
18 part of -- an internal document for your company; is
19 that correct?

20 A That's correct.

21 Q Now, we already identified Mr. Oulton. Who is Mr.
22 Newgar?

23 A That was Miss Newgar. She was a geologist, a mineral-
24 ogist in the Physical Measurements Group.

25 Q You're listed as a recipient of this memorandum?

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1 A That is correct.

2 Q Now, this memorandum has to do with samples of talc
3 from the Waterbury and Johnson mines; is that correct?

4 A That's what the document appears to indicate.

5 Q What was your company's interest in the Waterbury
6 mine?

7 A I don't know.

8 Q Do you have any idea why your company would be in-
9 volved in testing talc or talc ore from the Waterbury
10 mine?

11 A I only have a general idea of that.

12 Q And what is your general idea?

13 A I believe that the Waterbury mine was a talc deposit
14 that had been largely mined out many, many years ago.
15 The reasons why we would be interested in that parti-
16 cular sample, other than for comparative purposes, I
17 do not know.

18 Q Is the Waterbury mine near the Johnson mine?

19 (OBJECTION BY ALL DEFENSE COUNSEL)

20 A I don't know.

21 Q Do you know whether it's in the same geological forma-
22 tion as the Johnson mine?

23 (OBJECTION BY ALL DEFENSE COUNSEL)

24 A No, I do not know that.

25 Q Showing you Exhibit 21, do you have any independent

1 recollection of that document?

2 A No, I do not.

3 Q Dr. Hemstock, when the -- your Research and Develop-
4 ment Department sent a sample of some material out to
5 an outside laboratory to be tested, would it be the
6 practice of your department to keep in its files what-
7 ever report was received in response to that test?

8 A Yes, it would.

9 Q Your department would send the request out to an out-
10 side laboratory as a part of its ongoing business in
11 performing the analyses requested of it by its client
12 department?

13 A That's correct.

14 Q Do you know who Mr. J.H. Shafer is?

15 A He is the Plant Manager of the Emtal operation.

16 Q Could I see the last report or the last exhibit? I
17 think it would be 20. I show you Exhibit 22 for iden-
18 tification. Do you have any recollection of that docu-
19 ment?

20 A Only in general terms.

21 Q And what is your recollection?

22 A This was, as the document indicates, a request for a
23 transmission electron microscopy and selected area
24 diffraction evaluations on three bulk mineral samples
25 collected in 1979.

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1 Q This letter is a response to a request for that analy-
2 sis; is that right?

3 A That is correct.

4 Q Do you recall learning of the results that are re-
5 ported on that Exhibit No. 22?

6 A No, I do not.

7 Q You have no recollection of ever being told either by
8 Mr. Gale or by any other person that the laboratory
9 found what it characterized as extremely high levels
10 of chrysotile asbestos in one of the samples tested?

11 A I do not have a recollection of that fact.

12 Q You have no recollection of ever being told that?

13 A Not of this specific instance.

14 Q Do you have a recollection of ever having been told
15 that analysis of talc samples had found high or ex-
16 tremely high levels of chrysotile asbestos?

17 A I think that characterization is a relative term, and
18 what might be considered a high level by one indivi-
19 dual may not really in fact be a high level.

20 Q Do you have any recollecting of being told by any per-
21 son that analysis had shown what any person charac-
22 terized as being high or extremely high levels of as-
23 bestos in the talc?

24 (OBJECTION BY ALL DEFENSE COUNSEL)

25 A I don't specifically recall that.

1 Q Are you finished with your answer?

2 A Yes, I am.

3 Q When you say you don't specifically recall that, are
4 you saying you don't specifically recall the results
5 reported on Exhibit 22?

6 A That is correct, I do not.

7 Q But do you have any recollection without regard to
8 Exhibit 22 of ever receiving information that some
9 analyst had characterized the asbestos content of
10 your company's talc as being high or extremely high?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 A No, I cannot say that.

13 Q Do you have any recollection of ever having been told
14 by any person that an analyst had determined that the
15 asbestos content of talc sold by your company or from
16 your company's mine was at a greater level than trace
17 quantities?

18 (OBJECTION BY ALL DEFENSE COUNSEL)

19 A No, I cannot say that.

20 Q You never were told that there was any more than trace
21 quantities of asbestos in your company's talc?

22 (OBJECTION BY ALL DEFENSE COUNSEL)

23 A I do not specifically recall any instance of that.

24 Q Are you saying no person ever told you that?

25 (OBJECTION BY ALL DEFENSE COUNSEL)

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1 MR. KENNEDY: Told him what, trace quanti-
2 ties or --

3 Q Are you testifying that no person ever told you that
4 analysis had determined that there were more than
5 trace quantities of asbestos in your company's talc?

6 (OBJECTION BY ALL DEFENSE COUNSEL)

7 A Yes, that is my testimony.

8 Q Mr. Gale never told you that?

9 A No, he did not.

10 (OBJECTION BY ALL DEFENSE COUNSEL)

11 Q Now, showing you Exhibit 23, can you tell me what that
12 is?

13 A This was a work sheet that was used by the analyst,
14 in this case Mr. Gale, to interpret results from
15 transmission electron microscope analyses.

16 Q How do you know that was Mr. Gale?

17 A There's a signature here on the bottom.

18 Q Have you ever seen those before other than in prepara-
19 tion for this deposition?

20 A Yes, I believe I have.

21 Q And when?

22 A I believe these were -- these data were discussed and
23 reviewed generally at one -- at the meetings referred
24 to earlier.

25 Q You have a recollection of discussion of these results

1 as portrayed on Exhibit 23?

2 A Not those specific results.

3 MR. HALKET: I object to the last question
4 and the last answer, because if I understand your
5 question, it was have you ever seen the document; and
6 if I understand Glenn's answer, it beared no relation-
7 ship to whether he had ever seen the document. This
8 is a problem we've talked about before. He is testi-
9 fying about documents he's never seen. It's sheer
10 speculation.

11 THE WITNESS: Yes, that's --

12 Q I guess I didn't understand your earlier answer. Are
13 you testifying you have never seen that document
14 before?

15 A I have not seen that specific document. I have seen
16 some of those data before.

17 Q Are you saying you may have seen this document, but
18 you don't recall whether it was this specific one?

19 A I do not recall having seen that specific document.

20 Q But you may have seen it?

21 MR. HALKET: That's not what he testified
22 to.

23 A I don't recall having seen it.

24 Q Was it customary during the course of Mr. Gale's study
25 -- let me back up. Was this document, to the best of

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1 your knowledge, prepared as a part of Mr. Gale's
2 study that you previously testified to that took
3 place during 1978 and 1979?

4 A I believe --

5 (OBJECTION BY ALL DEFENSE COUNSEL)

6 A -- to the best of my knowledge.

7 Q Are you familiar enough with the method of Mr. Gale's
8 research to be able to testify as to what it is that's
9 portrayed on that document?

10 (OBJECTION BY ALL DEFENSE COUNSEL)

11 A Mr. Gale was carrying out transmission electron micro-
12 scope studies, and his intent here was to identify
13 the number of fibers, fibrous material, in those
14 transmission electron microscope samples.

15 Q Did you, during the course of Mr. Gale's study, dis-
16 cuss the results of his studies with him as he pro-
17 duced those results?

18 A Not as he produced them, only in general terms.

19 Q And would you meet periodically with Mr. Gale to re-
20 view the results that he had achieved as part of his
21 study?

22 A Not normally with Mr. Gale.

23 Q With whom would you meet to discuss --

24 A Well, there were others involved. Mr. Gale did not
25 report to me directly. Normally, Mr. Dzierzanowski

1 and Mr. Triglia would also be present.

2 Q Would Mr. Gale be present, also?

3 A Normally, he would.

4 Q Was it your practice at these periodic meetings to
5 sit down and review some of the actual work sheet
6 results that Mr. Gale or others working on the study
7 had prepared as a part of their study?

8 A Not normally the original documents. He would sum-
9 marize the significant data that he had obtained, and
10 it would normally be a summary of those data that I
11 would review.

12 Q Now, across the top of this first page of Exhibit 23
13 are labeled "Emtal 42" and then there's a number
14 79-J-2 underneath that. Can you tell me what that
15 refers to or what that signifies?

16 A No, I don't know what that signifies.

17 Q Have you ever heard of the term "Emtal" before?

18 A Yes, I have.

19 Q What is that?

20 A Emtal refers to products produced from the Johnson
21 mine.

22 Q Emtal 42, have you ever heard of any talc referred to
23 as Emtal 42 talc?

24 A Yes. Emtal 42 is a specific grade of talc produced
25 in the Emtal mine.

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1 Q Column one and three both are headed "Emtal 42"; is
2 that right?

3 A That's correct.

4 Q And part of Mr. Gale's responsibility in the course
5 of carrying out this study was to analyze the content,
6 mineral content, of talc including Emtal 42?

7 A That was one of the commercial samples that was cer-
8 tainly included.

9 Q Do you know what kind of a talc Emtal 42 is?

10 (OBJECTION BY ALL DEFENSE COUNSEL)

11 A It's a relatively coarse particle-sized talc.

12 Q Is that trial grade talc?

13 (OBJECTION BY ALL DEFENSE COUNSEL)

14 A Yes, I believe so.

15 Q Do you know what markets or industries utilize Emtal
16 42 talc?

17 A No, I do not.

18 Q There's a notation partway down this document. It
19 says, "Fibers counted per fifteen grid openings minus
20 blank," and then there is an asterisk, and the as-
21 terisk at the bottom states, "Blank equals four fibers"

22 A That's correct.

23 Q What fibers is it that were being recorded on this
24 document, to the best of your knowledge?

25 (OBJECTION BY ALL DEFENSE COUNSEL)

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1 A To the best of my knowledge, the mounting of scanning
2 electron microscope samples is prepared on a screen,
3 and the screen has openings which are considered to be
4 grid openings. In the normal course of counting, you
5 count -- we would count or Mr. Gale would count fif-
6 teen grid openings and count the number of fibers that
7 he saw on that number -- on that field.

8 Q Fibers of what, though?

9 A Just fibers.

10 Q Any fibers?

11 A Any fibers.

12 Q What fibrous minerals do you know of that were iden-
13 tified as being constituents of Emtal 42 talc?

14 (OBJECTION BY ALL DEFENSE COUNSEL)

15 MR. HALKET: Do you understand that ques-
16 tion?

17 THE WITNESS: It's a broad question. Could
18 you be more definitive?

19 Q Emtal 42 talc, to your knowledge, does Emtal 42 talc
20 contain any minerals other than the pure mineral talc?

21 A Yes, it does.

22 Q Does it contain several other minerals besides pure
23 talc mineral?

24 (OBJECTION BY ALL DEFENSE COUNSEL)

25 A Yes, it does.

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1 Q How many of those other minerals besides talc are
2 fibrous in nature?

3 (OBJECTION BY ALL DEFENSE COUNSEL)

4 A There could be several.

5 Q And which ones?

6 (OBJECTION BY ALL DEFENSE COUNSEL)

7 A Serpentine could be present. I would make a distinc-
8 tion between asbestiform minerals and asbestos
9 minerals.

10 Q Fine.

11 A And asbestiform minerals might also be considered
12 fibrous in the context of this study.

13 Q What asbestiform minerals are you referring to?

14 A Things like serpentine, like chlorite. Those would
15 probably be the main ones.

16 Q Is it your testimony that chlorite is a fibrous form
17 of mineral particle?

18 (OBJECTION BY ALL DEFENSE COUNSEL)

19 A It depends how it fractures and how the sample is
20 prepared. Chlorite is one of the -- the parent rocks
21 of the deposit. It is not talc per se, but it is one
22 of the parent rocks derived from talc. I believe that
23 chlorite normally is platy in shape.

24 Q What other mineral constituents of Emtal 42 talc be-
25 sides serpentine and chlorite are fibrous in form?

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(OBJECTION BY ALL DEFENSE COUNSEL)

1
2 A In the preparation of an electron microscope sample,
3 there is ample opportunity for extraneous fibers to
4 be present just from the ambient air. So, consequent-
5 ly, one might pick up a cellulose fiber and consider
6 it a fiber in the electron microscope if one didn't
7 attempt to identify it further.

8 Q Do you know whether the analytical techniques that
9 were utilized in this study incorporated any measures
10 to avoid contamination by atmospheric fibers?

(OBJECTION BY ALL DEFENSE COUNSEL)

11
12 A I don't know that. I do know that there was a period
13 when the electron microscope we were using was con-
14 taminated. The Georgia Tech instrument was used for
15 a wide variety of samples, and once the contaminant
16 material got inside the barrel of the microscope, it
17 could contaminate the samples almost at random. There
18 was considerable effort made by Georgia Tech to get
19 their microscope cleaned up. It's difficult.

20 Q Did your company continue to use that Georgia Tech
21 facility after it knew that the microscope had become
22 contaminated?

23 A Yes, we did.

24 Q And were you not concerned about the effect on the
25 results of your tests?

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1 A Yes, we were, and we verified when they had it cleaned
2 up by submitting duplicate or replicate samples.

3 Q How did you determine that it had been cleaned up?

4 A If on two consecutive sampling periods or testing
5 periods we got the same number, that was at least some
6 indication that it had been cleaned up.

7 Q Did the testing procedures that were undertaken during
8 this study include any other tests to definitely iden-
9 tify or more definitely identify the minerals which
10 were found in fiber form?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 A Well, the only more definitive test of which I'm aware
13 is the selected area electron diffraction. That was
14 done on some samples.

15 Q Which samples?

16 A Only -- well, that is a test which positively iden-
17 tifies the mineral component of a given fiber so that
18 you're really only looking at the mineralogy of a
19 single particle.

20 Q Did those tests confirm the presence of asbestos in
21 any of the Emtal talcs studied?

22 A In some cases they did.

23 Q And do you know whether the test results which show
24 those results are incorporated or included within
25 this stack of documents that have been provided today?

1 A Yes, I believe so.

2 Q Can you tell me what Exhibit 24 is?

3 A Yes, in general I can.

4 Q And what is it?

5 A This was the results of a petrographic analysis by
6 an outside consulting firm run by an individual by
7 the name of Fred Farwell.

8 Q When was that completed?

9 A The document itself suggests that he was looking at
10 1977 material.

11 Q Is there a date on the document that shows a comple-
12 tion date?

13 A Yes, July 7, 1977.

14 Q Do you have an independent recollection of that study?

15 A Not of this specific study, I do not.

16 Q Or of the results that were obtained in the study?

17 A No, I do not.

18 Q When you say you have no recollection of this specific
19 study, do you have a recollection generally of studies
20 that were conducted by Mr. Farwell?

21 A Mr. Farwell was a microscopy expert, and we used him
22 for phase contrast microscope evaluations and also
23 for refractive index determinations.

24 Q Are those testing procedures ones that are utilized
25 to determine asbestos contamination of samples?

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(OBJECTION BY ALL DEFENSE COUNSEL)

1
2 A The phase contrast microscope has been used in an
3 effort to identify asbestos-type minerals.

4 Q It is not a definitive test procedure?

5 A It is not a definitive procedure.

6 Q Do you have any recollection of what Exhibit 25 is?

7 A No, I do not.

8 Q You have never seen that before or you have no recol-
9 lection of having seen it?

10 A I have not seen this before, I do not believe.

11 Q Have you ever seen Exhibit 26 before?

12 A No, I have not.

13 Q Do you know what it is?

14 A No, I do not.

15 Q Have you ever seen Exhibit 27 before?

16 A Yes, I'm generally familiar with it.

17 Q What is it?

18 A It was a request to Johns-Manville for determination
19 of fibers by the phase contrast microscope. This was
20 a technique which at that time, 1972, we did not have
21 in-house.

22 Q Do you remember your department requesting Johns-
23 Manville to perform tests as an outside laboratory
24 for your department?

25 A We used many outside laboratories as indicated in the

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1 documents you've seen earlier. I do not specifically
2 recall Johns-Manville as being one of them.

3 Q You have no recollection of that?

4 A No, I do not.

5 Q Who wrote the memorandum that's attached as page two
6 of that exhibit?

7 A That memorandum is written by me.

8 Q Does that memorandum make reference to sending samples
9 out to Johns-Manville?

10 A Yes.

11 Q For testing?

12 A Yes, that's strongly indicated.

13 Q Look at Exhibit 28. Tell me if you have any recollec-
14 tion of that?

15 A Generally, yes.

16 Q This is an inter-department memorandum from your com-
17 pany; is that correct?

18 A From a member of our company, yes.

19 Q Within your company?

20 A That's correct.

21 Q Down at the bottom it's "Copy to" followed by initials?

22 A That's correct.

23 Q Your initials are the first set?

24 A That's correct.

25 Q There's a circle around your initials. Does that mean

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1 this was your copy of this memorandum?

2 A This, I believe, is a copy of a copy, and the fact
3 that this is circled would suggest that it was my
4 file copy that was used to make this copy.

5 Q So, does that mean that the document from which this
6 copy was made was pulled from your file?

7 A It would be pulled from the general files that we
8 talked about earlier. It would not be from my personal
9 file.

10 Q The circle around it, your initials down here, does
11 that mean that was your copy of this document?

12 (OBJECTION BY ALL DEFENSE COUNSEL)

13 A This copy was made for my eyes, but --

14 Q Yes?

15 A -- but in fact it would go into the general files we
16 talked about earlier. It would not be retained by me.

17 Q This document refer to a meeting that was held in con-
18 junction with the 1978-1979 study that you testified
19 to earlier?

20 A Yes, I believe that's true.

21 Q Was that early on in the study or late in the study?

22 A This was fairly early on in the study.

23 Q Do you have any recollection of the meeting that --

24 A I have a general recollection of it, yes.

25 Q -- took place?

1 A Yes.

2 Q What happened at that meeting?

3 A Well, this was a review of the results that we obtained
4 to date, and a general discussion of what further work
5 needed to be done.

6 Q Do you recall what the results were that you received
7 to date?

8 A No, I do not.

9 Q I show you Exhibit 29. What is that?

10 A This was a request by Mr. Oulton to representatives
11 of Johns-Manville for a phase contrast microscopy
12 analysis.

13 Q It's an invoice for outside laboratory work?

14 A That's correct.

15 Q Done by Johns-Manville for your department; is that
16 right?

17 A That's correct.

18 Q What is the date on that?

19 A May 1, 1973.

20 Q I show you Exhibit 30. Have you ever seen that before?

21 A No, I have not.

22 Q Who is C.Y. Haas?

23 A Mr. Haas was the Vice President of Administration of
24 the Minerals and Chemicals Division at that time.

25 Q Do you have any recollection of Exhibit 31?

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1 A No, I do not.

2 Q This is a memorandum on the letterhead of your company?

3 A Yes, I believe so.

4 Q Your initials appear at the bottom of the page?

5 A That is correct.

6 Q As being a recipient of a copy?

7 A As being a recipient of a copy, correct.

8 Q There's a circle around your initials there?

9 A Yes.

10 Q You have no recollection of having received that?

11 A No, I do not.

12 Q Do you remember back when we discussed Exhibit 9, I'd
13 asked you if you'd ever seen the name Mr. Nadkarni
14 before?

15 A Yes, correct.

16 Q You've never seen that before?

17 A I do not know the gentleman.

18 Q His name appears on this document as well, doesn't it?

19 A Yes, it does.

20 Q You received a copy of that document?

21 A Yes, that's correct.

22 Q In fact, several of the individuals listed on Exhibit 9
23 are also listed on Exhibit 31, aren't they?

24 A My interpretation would be that these were Exxon peo-
25 ple, but I do not know other than what's on the docu-

1 ment.

2 Q Do you know what Exhibit 32 is?

3 A This was a description of a procedure used for looking
4 for fibers in phase contrast microscopy. At that
5 time, Miss Newgar who had just joined our staff was
6 attempting to learn the technique.

7 Q Approximately when was that prepared?

8 A 1976, early '77.

9 Q Do you have any independent recollection of either the
10 preparation of that or what it was used for?

11 A No, I don't.

12 Q Who's Daniel A. Jacobs?

13 A May I see the date?

14 Q Yes, sir. It's August 3, 1979.

15 A Mr. Jacobs was the Production Manager of the Emtal
16 operation. The Plant Manager at Emtal reported to
17 Jacobs who was located at Menlo Park.

18 Q Jacobs was located at Menlo Park, and the Plant Manager
19 was located in Johnson, Vermont?

20 A That is correct.

21 Q And the Plant Manager was Mr. Shafer?

22 A That is correct.

23 Q Who was Mr. C.C. Clarke?

24 A Mr. Clarke was responsible for environmental activities
25 within the Minerals and Chemicals Division.

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(RECESS)

1
2 Q Did you ever see this Exhibit 33 before?

3 A No, I have not.

4 Q Do you have any idea what Mr. Jacobs was referring to
5 in the memo at the last page of that where he says,
6 "...the attached report looks like more potential
7 trouble for Emtal"?

8 A No, I would not know that. I do not know.

9 Q Have you ever seen Exhibit 34 before?

10 A This is the continuation of one of the earlier docu-
11 ments in which Miss Newgar was attempting to identify
12 the mineral species that were present in samples of
13 talc by phase contrast microscopy.

14 Q And would that again date back to 1976?

15 A Well, this was somewhat later. The dates indicated
16 are April 7, 8.

17 Q Do you know whether that was prepared as a part of the
18 study that took place during 1978 and 1979 that you've
19 described?

20 A I do not believe so.

21 Q Can you tell me what Exhibit 35 is?

22 A This is a Technical Service Request also for evaluation
23 of samples of competitive talc.

24 Q Now, this TSR is directed towards you; is that right?

25 A Yes, that is correct.

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1 Q It's from a Mr. Wert?

2 A Yes.

3 Q Who is that?

4 A Mr. Wert is -- he's a -- he's in the Planning and
5 Development Department. He's basically a marketing
6 man.

7 Q Now, a response was prepared to this TSR; correct?

8 A That's correct.

9 Q Who prepared the response?

10 A Martha Hamel who is the electron microscopist in R & D.
11 I believe she is the person who signed this Technical
12 Service Request.

13 Q Did you review the response that was given to that
14 TSR?

15 A No, I have not.

16 Q Do you know whether you would have reviewed that at
17 the time it was submitted to Mr. Wert?

18 A It would probably have crossed my desk.

19 Q Would you probably have read it when it crossed your
20 desk?

21 A I might have read it when it crossed my desk.

22 Q Do you agree with the statements contained at page two
23 in this document, "Although no asbestos was found in
24 these samples, the presence of serpentine requires
25 that a sharp lookout be kept for chrysotile?"

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(OBJECTION BY ALL DEFENSE COUNSEL)

A Would you repeat the question now?

Q Do you agree, although no asbestos was found in these samples, the presence of serpentine requires that a sharp lookout be kept for chrysotile?

(OBJECTION BY ALL DEFENSE COUNSEL AND MOTION TO STRIKE)

A I think Dr. Hamel is relatively unfamiliar with the fact that small amounts of chrysotile may have been present in our talc samples in the past. I think she was identifying this as something that might not have been familiar with her, but was familiar to the rest of us.

Q Do you agree with this statement, that the presence of serpentine requires that a sharp lookout be kept for chrysotile?

(OBJECTION BY ALL DEFENSE COUNSEL)

A Yes, I would generally agree with that.

MR. DOLAN: Could we have the date of that exhibit, please?

MR. PRENTISS: Yes. This exhibit is dated July 15, 1982.

Q And can you tell me what is the identification of the source of the talcs that are tested under this TSR?

A I can only identify the first two.

1 Q And what are they?

2 A Those are samples from --

3 MR. SARLI: I object. If you look inside
4 it says "Vental," not Vertal.

5 THE WITNESS: I would interpret that as
6 competitive samples of Vermont talc.

7 Q Vertal, what does that refer to?

8 MR. SARLI: I object.

9 A That is a commercial -- a trade name for talcs pro-
10 duced by that company.

11 Q By the Vermont Talc Company?

12 A That is my understanding.

13 Q And could you tell me whether you recall Exhibit 36?
14 Your answer, sir?

15 A Excuse me. What was the question?

16 (PREVIOUS QUESTION READ BY REPORTER)

17 A No, I do not.

18 Q That's a memorandum, inter-department memorandum within
19 your company?

20 A That is correct.

21 Q It's addressed to you from Mr. Triglia?

22 A That is correct.

23 Q It's dated May 22, 1979?

24 A That is correct.

25 Q You have no recollection of having received this?

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1 A No, I do not.

2 Q Do you know whether you would have read this at the
3 time that you received it?

4 A I believe I would have.

5 Q Is that your practice, to read memoranda that were
6 directed to your attention?

7 A Very much so.

8 Q Dr. Hemstock, in the first full paragraph of page two
9 of this memorandum, there is a statement from Mr.
10 Triglia that, "The results showed that although there
11 was a variability in the number of fibers counted from
12 week to week, there were, nevertheless, fibers present
13 in every sample of Emtal 42 tested. A few of the Emtal
14 42 samples showed relatively high fiber counts." Do
15 you know to what fiber Mr. Triglia is referring in that
16 sentence?

17 (OBJECTION BY ALL DEFENSE COUNSEL)

18 A Those would be fibers observed in the electron micro-
19 scope evaluation of those samples.

20 Q And do you know whether Mr. Triglia was referring to
21 a particular mineral fiber?

22 (OBJECTION BY ALL DEFENSE COUNSEL)

23 A I do not know that.

24 Q Mr. Triglia, in paragraph one of the first page states,
25 "Evidence of serpentine fibers were found. These

1 fibers have a very distinctive and unique shape which
2 makes them easy to identify." Does that statement
3 refresh your recollection as to the mineral fibers to
4 which Mr. Triglia referred in the paragraph I read
5 from on page two?

6 A No, it does not. All this refers to is a specific
7 shape which he generally classifies as a serpentine
8 fiber without any positive mineralogical identification.

9 MR. HALKET: I'm going to object to that
10 question in that it implies that he had a recollection
11 as to what was in the memo.

12 Q Do you have any recollection of seeing Exhibit 37
13 before?

14 A No, I do not.

15 Q Do you have a recollection of seeing Exhibit 38 before?

16 A No, I do not have a recollection of having seen this
17 document.

18 Q In the first page of this Exhibit 38 is a copy of a
19 small memo pad page with the name of Mr. Triglia on
20 it. Is that Mr. Triglia's handwriting?

21 A I believe it is.

22 Q You have no recollection of receiving a copy of this
23 TSR and the attached reports?

24 A No, I do not.

25 Q Your initials are here and indicate that you did receive

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1 a copy, though?

2 A That is correct.

3 Q Do you have any recollection of Exhibit 39?

4 A No, I do not.

5 Q Would you state what Exhibit 40 is?

6 A I believe these are the results of a phase contrast
7 microscopic evaluation of samples of Waterbury talc.

8 Q This is in 1978 that that was prepared; is that true?

9 A April 20, 1978.

10 Q This was prepared by your department, is that --

11 A Yes, that is correct.

12 Q Why was your department interested in studying the
13 mineral content of Waterbury talc or Waterbury talc
14 ore?

15 (OBJECTION BY ALL DEFENSE COUNSEL)

16 A The samples in question were taken by a geologist who
17 was not within the R & D Department, and this was a
18 request by him for work to be done. I cannot respond
19 to why he was interested in these particular samples.

20 Q Do you know what Exhibit 41 is?

21 A This was a request for mineralogical evaluation of
22 air samples collected in various parts of the Emtal
23 Plant.

24 Q Do you have any recollection whatsoever of seeing that
25 document before?

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1 A Generally, yes, I do.

2 Q What's your recollection?

3 A Well, my recollection is that there were small amounts
4 of fibers identified on the filters that were collected
5 from these samples.

6 Q Do you have an independent recollection of that
7 separate and apart from reference to the document?

8 A Yes, I'm quite familiar with this.

9 Q What is it about that test or occurrence that make it
10 stick out in your memory?

11 A It happened April 19, 1982. It's more recent than
12 most of the rest of the documents.

13 Q I show you Exhibit 42. Do you know what that is?

14 A This is the request by Mr. Triglia for microscopic
15 examination of a sample of talc.

16 Q Do you know what the results of that examination were?

17 A No, I do not.

18 Q You don't remember having seen that before?

19 A I don't recall this at all.

20 Q No. 43, is that something you have any knowledge of?

21 A No, I do not.

22 Q You've never seen that before, to the best of your
23 recollection?

24 A To the best of my recollection, I did not.

25 Q I show you Exhibit 44. Do you have any knowledge of

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1 that?

2 A No, I don't.

3 Q That Exhibit 44 appears to make reference to Exhibit 43?

4 A Yes.

5 Q Does it not?

6 A Yes, to the Selevan (Niosh) study, correct.

7 Q Did you have any involvement in occupational health
8 or safety as part of your work at the company?

9 A No, I did not. At this time, Mr. Oulton was not in
10 the Research Department. He was in the Administration
11 Department.

12 Q So, your activities did not in any way involve possible
13 compliance with standards of governmental agencies
14 that may be applicable to mining?

15 A That's correct.

16 Q You had no involvement whatsoever?

17 A None whatsoever.

18 Q Other than requests that might be made to you for
19 analysis of samples?

20 A Correct, yes.

21 Q I show you Exhibit 45. Do you have any recollection
22 of that?

23 A This was a summary of results that were obtained as
24 a result of a marketing Technical Service Request
25 relative to the fiber content of competitive products.

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1 MR. HALKET: That was not the question he
2 asked. Answer the question he asked. Would you re-
3 peat it, please?

4 Q Do you recall this document?

5 A I do not recall this document.

6 Q You have no recollection whatsoever of ever having
7 seen this before?

8 A No, I do not.

9 Q This is addressed to you?

10 A That's correct.

11 Q From Mr. Triglia?

12 A Yes.

13 Q And that's 1979?

14 A Yes.

15 Q That's too far back for recollection?

16 (OBJECTION BY ALL DEFENSE COUNSEL)

17 A Yes, it is too far back for my specific recollection.

18 Q Now, this document shows test results of various talc
19 samples for fiber content; is that true?

20 (OBJECTION BY ALL DEFENSE COUNSEL)

21 THE WITNESS: Would you repeat the question,
22 please?

23 (PREVIOUS QUESTION READ BY REPORTER)

24 (OBJECTION BY ALL DEFENSE COUNSEL)

25 MR. KENNEDY: You're asking for the witness'

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1 interpretation of the witness reading the document?

2 MR. PRENTISS: What the document portrays.

3 MR. KENNEDY: Doesn't it speak for itself?

4 What probative value does it have if he reads the
5 document and tells you what he thinks it says?

6 THE WITNESS: Yes. Generally, that's what
7 this document purports to do.

8 Q The document that you reviewed at the time it was
9 submitted to you?

10 (OBJECTION BY ALL DEFENSE COUNSEL)

11 THE WITNESS: Would you repeat the question?

12 Q Was it your normal practice to review documents that
13 were submitted to you?

14 A Yes.

15 Q That was submitted to you?

16 A Yes, I believe so.

17 Q Now, the document shows asbestos totals for Emtal
18 samples; for example, Emtal 42, and that refers again
19 to Emtal 42 talc?

20 (OBJECTION BY ALL DEFENSE COUNSEL)

21 A Yes, I believe so.

22 Q Asbestos total, trace, 0 to 5; do you have any idea
23 what the zero to five represents?

24 A No, I don't. I don't know what this column refers to
25 at all.

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1 Q So, you wouldn't know what the line, for example, that
2 shows Emtal 42, across the column, asbestos total,
3 many, 15 to 50 --

4 A No, I do not.

5 Q You don't know what that represents?

6 A No, I do not.

7 Q There's a reference to laboratory used in one column.
8 The initials are E.I. INST. Do you know what that
9 refers to?

10 A That's the Engelhard Industries Instrumentation
11 Laboratory.

12 Q Where is that located?

13 A That was located at Menlo Park.

14 Q The asbestos fiber total on this column is listed as
15 abundant, greater than fifty. Do you know what that
16 signifies?

17 A No, I don't.

18 Q Who would?

19 MR. KENNEDY: If you know.

20 A I don't know who would.

21 Q Well, E.I. Instrument Laboratory, that's Engelhard
22 Industries; is that correct?

23 A Yes, that's correct.

24 Q Is that laboratory within the same office building
25 that you work in?

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1 A It's in the same building. This document in 1979,
2 this laboratory had electron microscope capability.
3 We did not. The people who ran this test were merely
4 providing a service to us when we requested it.

5 Q Do you have any reason to doubt the accuracy of any
6 of the figures that are portrayed on this sheet?

7 (OBJECTION BY ALL DEFENSE COUNSEL)

8 A The quality of results that the Engelhard Industries
9 Laboratory in general turned out was not up to the
10 quality of the Georgia Tech Laboratories. I think the
11 Georgia Tech people had more skills in dealing with
12 mineral species. The Engelhard Industries group pri-
13 marily dealt with metals.

14 Q Did the Engelhard Industries Laboratory have a selected
15 area electron diffractometer?

16 A Electron diffraction capabilities? I don't know that.

17 Q Tell me this. Do you know who performed the tests
18 that are shown on Table 2 that's attached to this
19 exhibit?

20 A Yes. The document says that Table 2 results were per-
21 formed by Georgia Tech.

22 Q Which is a more reliable testing --

23 A In my general experience with the two groups, yes, I
24 would say so.

25 Q More reliable testing for mineral identification than

1 the E.I. Instrument Laboratory?

2 A I would think so.

3 Q That laboratory found asbestos total for Emtal 42 talc
4 at the Sample No. 4026-12 as many, fifteen to fifty?

5 (OBJECTION BY ALL DEFENSE COUNSEL)

6 A I can't address the response to that question at all.

7 Q Now, the bottom of this page, the sentence that, "Most
8 of the fibers were small, but several of the Emtal
9 samples had a few fibers longer than five microns,"
10 do you recall now having learned that those test re-
11 sults were achieved on Emtal talc?

12 (OBJECTION BY ALL DEFENSE COUNSEL)

13 A That's what Table 2 would suggest. I do not have any
14 independent recollection of that fact.

15 Q Do you have any reason to doubt the accuracy of the
16 results from the Georgia Tech Laboratory portrayed on
17 Table 2?

18 (OBJECTION BY ALL DEFENSE COUNSEL)

19 A I have no opinion.

20 Q None whatsoever?

21 A I have no reason to believe that they were in error;
22 but conversely, I can't validate that, either.

23 Q This memorandum is to you from Mr. Triglia. Was it at
24 your request that these samples were tested?

25 A No, it was not.

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1 Q At whose request was it?

2 A Mr. Triglia, I believe, made such decisions on his
3 own. If he decided that Engelhard Industries for
4 verification purposes should carry out other tests,
5 he would make that decision. If he wanted Georgia
6 Tech to do the testing, he would also make that deci-
7 sion.

8 Q Mr. Triglia reported to you?

9 A Yes, he did.

10 Q Do you have any recollection or knowledge why Mr.
11 Triglia would have reported these results to you?

12 (OBJECTION BY ALL DEFENSE COUNSEL)

13 A He was merely interpreting results that had been made
14 as indicated here at the request of the Marketing
15 Department. I have no other reason to specifically
16 know.

17 Q Well, why in the practice of your department would
18 Mr. Triglia report these results to you when he was
19 requested to obtain this information by the Marketing
20 Department?

21 (OBJECTION BY ALL DEFENSE COUNSEL)

22 A I would say that this was only a routine. Mr. Triglia,
23 I can only surmise, evidently thought these results
24 were significant enough to report them in this fashion.

25 Q Do you know what Exhibit 46 is?

1 A I have no independent knowledge of this.

2 Q You've never seen this before?

3 A Not to my knowledge.

4 Q Do you know what Exhibit 47 is?

5 A This is a series of samples that were obtained from a
6 potential acquisition candidate.

7 Q Does that mean a mine that your company was considering
8 purchasing?

9 A That's correct.

10 Q When approximately was this prepared?

11 MR. HALKET: Let the record show that the
12 witness is once again reading the document to find the
13 answer.

14 A In the period of mid-year, 1977.

15 Q Do you have any independent recollection of the studies
16 that are represented by that exhibit?

17 A Only in a very general way.

18 Q What is your recollection?

19 A I was aware that the studies were underway to appraise
20 the quality of the deposit for potential acquisition.

21 Q Do you know whether the deposit was studied for poten-
22 tial asbestos content?

23 A This was an asbestos deposit.

24 Q There was consideration of purchasing an asbestos mine?

25 A There was some consideration given at that time.

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1 Q Was it purchased?

2 A It was not.

3 Q Dr. Hemstock, page one of this, the first entry is
4 Emtal 42. Can you tell me what that means in relation
5 to the potential purchase?

6 A No, I cannot.

7 Q What is it on this document that leads you to conclude
8 that it has to do with a potential purchase?

9 A The title of the document itself, VAG core samples

10 Q And what does "VAG" refer to?

11 A VAG refers to Vermont Asbestos Group.

12 Q I show you Exhibit 48. Did you ever see that before?

13 A I have no independent recollection of this.

14 Q That's July of '82, isn't it?

15 A That's correct.

16 Q Did you receive a copy of this?

17 A Yes, I did.

18 Q You don't remember this one?

19 A I don't recall it.

20 Q The paragraph numbered one here in the body of this,
21 this is a TSR again?

22 A That's correct.

23 Q "Fiber content: This information is required immediate-
24 ly and should be conveyed orally as soon as it is avail-
25 able," and under or pointing towards the, orally is

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1 the handwritten word "only" underlined. Do you know
2 why it was that the fiber information was to be trans-
3 mitted only orally?

4 A No, I do not.

5 Q Whose direction was it that that information would
6 only be transmitted orally?

7 A I have no idea.

8 Q Did you receive a copy of this?

9 A The document would indicate such.

10 MR. KENNEDY: With or without the margin-
11 alia.

12 Q Did you ever receive the information, the study re-
13 sults that are summarized on Exhibit 48? Refer to it,
14 if you like.

15 A I had no reason to believe I received any more than
16 what is described here.

17 Q Now, Exhibit 49 was loose material that was in the
18 pocket of a looseleaf binder. Do you have any familiar-
19 ity with that material?

20 A Other than the fact that it appears to be a work sheet,
21 I have no knowledge of this document.

22 Q Do you know the looseleaf binder that I'm referring
23 to?

24 A No, not on the basis of information conveyed here, I
25 don't know what you're referring to.

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1 Q Do you know that your counsel came over today with a
2 black looseleaf binder that was filled with documents,
3 and this Exhibit 50 is a bundle of copies of all those
4 documents?

5 A Yes.

6 Q Are you familiar with that series of documents?

7 A I believe this was a record that Mr. Gale kept of some
8 of the raw data that he accumulated.

9 Q That is the entire contents of the looseleaf binder?

10 A I'm not specifically familiar with this document.

11 Q By that you're referring to the entire bundle?

12 A To the entire bundle.

13 Q And do you know where that black looseleaf binder came
14 from and the documents contained in it?

15 A No, I do not.

16 Q Had you ever seen those before you prepared for this
17 deposition?

18 A No, I had not.

19 Q How is it that you know --

20 MR. HALKET: A point of clarification.

21 You're asking whether he had seen the specific docu-
22 ments in the binder and not copies of them that might
23 have been somewhere else, I take it?

24 MR. PRENTISS: That's right.

25 Q How is it that you know that that represents work sheets

1 kept by Mr. Gale during the course of his study?

2 MR. HALKET: Objection. He didn't say he
3 knew. He surmised it.

4 (OBJECTION BY ALL DEFENSE COUNSEL)

5 A That was only a presumption on my part.

6 Q On what basis do you make that presumption?

7 A Some of the earlier documents that we discussed basi-
8 cally had the same kind of calculations in them, and
9 so far as I'm aware, Mr. Gale was the only person in
10 our department who made such calculations.

11 Q In conjunction with the study?

12 A Not necessarily in conjunction with the study. He
13 would -- there were a number, as is evident here from
14 the TSR's, there were a number of small independent
15 requests. He would use these kinds of calculations in
16 responding to those as well.

17 Q Now, these work sheets, to your knowledge, do these
18 represent just his work sheets representing the results
19 of his analyses as he obtained them?

20 (OBJECTION BY ALL DEFENSE COUNSEL)

21 A I don't know that.

22 Q Was there a report ever made of the study that Mr. Gale
23 and the others conducted?

24 MR. KENNEDY: Which study?

25 MR. HALKET: I think the evidence shows

1 there were a number of studies.

2 ~~X~~ MR. PRENTISS: I'm talking about the study
3 that Dr. Hemstock has testified to that took place in
4 1978 and 1979 in which Mr. Gale took part.

5 A Yes, there were, that probably appeared in memoranda.
6 I think we've seen the results of them this afternoon.

7 Q Well, the memoranda that we've seen are brief memoranda
8 without conclusions or summaries of the results of
9 tests. Was there any final report that was written
10 regarding that series of tests?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 A I don't recall that there was.

13 Q You don't recall that there was?

14 A I don't recall that there was.

15 Q You mean there could have been, but you wouldn't remem-
16 ber?

17 (OBJECTION BY ALL DEFENSE COUNSEL)

18 A I just don't recall it.

19 Q How long did this study take to perform?

20 (OBJECTION BY ALL DEFENSE COUNSEL)

21 MR. HALKET: What study?

22 Q Dr. Hemstock, do you have any question about what study
23 I'm asking you about?

24 A I assume you're talking about the study in which Mr.
25 Gale and I visited the Vermont mine.

1 Q That's right.

2 A That study probably occurred over several months, but
3 it was not a dedicated effort on anybody's part. It
4 was a relatively small study that was almost like a
5 TSR except it was initiated within my department as
6 opposed to being requested by others.

7 Q And why was it initiated within your department?

8 A Mr. Gale and I -- I had never been to the Emtal mine
9 or plant, nor had Mr. Gale. Mr. Gale had just joined
10 the organization, and we were generally interested in
11 learning more about the nature of the Emtal deposit,
12 and I was personally interested in seeing the proces-
13 sing operation.

14 Q One of the purposes of the study was to determine
15 asbestos content in the talc and the ore; is that
16 correct?

17 A No, it was not.

18 Q It was not?

19 A No, it was not. It was a broader intent than that.
20 We wanted to see the general geology of the deposit.
21 We wanted to find out what other mineral constituents
22 there were. If we found asbestos, that was -- so be it.
23 We were really looking for other things like magnesite
24 content, iron carbonate content, other extraneous
25 minerals like chlorite, like sphene. So, it was a much

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1 broader study than you have indicated..

2 Q And was asbestos one of the minerals that was looked
3 for?

4 A We looked for fibers. We were interested in morphology.
5 We were interested in knowing what our talc -- the
6 basic morphology of the talc deposit. If we found
7 fibers, when you're looking in an electron microscope,
8 you see what you see.

9 Q My question was: Was asbestos one of the minerals
10 that was looked for in the talc?

11 A Yes, it was one of the minerals.

12 Q How many other such studies did your department ini-
13 tiate of its own the way that you describe this re-
14 port -- this study as being initiated on its own during
15 the time that you have been associated with the depart-
16 ment?

17 A To my knowledge, none.

18 Q This is the only one?

19 A That is correct.

20 Q You do not know whether a report was prepared at the
21 end of that study?

22 A I'm not sure that a final report was ever issued.

23 Q And was an interim report ever issued?

24 A In the form of a memoranda, some of which you have
25 seen.

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1 Q Are there any interim or other reports that were pre-
2 pared regarding that study that you have now identi-
3 fied during the course of this deposition?

4 A Not to my knowledge.

5 Q To the best of your recollection, just from this depo-
6 sition, do any of the reports that we've identified
7 during the course of this deposition present study
8 results; that is, the results of analyses of the
9 mineral constituents of talc from the Emtal mine ob-
10 tained during that study?

11 (OBJECTION BY ALL DEFENSE COUNSEL)

12 MR. KENNEDY: You're talking about the
13 field trip?

14 MR. PRENTISS: That's right.

15 THE WITNESS: Would you repeat the question,
16 please?

17 (PREVIOUS QUESTION READ BY REPORTER)

18 MR. SLOANE: Do you understand the question?

19 (PREVIOUS QUESTION READ BY REPORTER)

20 MR. CURRAN: He's already so testified.

21 MR. PRENTISS: No, he hasn't.

22 MR. HALKET: He has testified he isn't

23 familiar with a great number of these documents. I
24 don't know whether he would know --

25 A Yes, I believe some of those data are reported in here.

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1 Q And where else -- where would the rest of those data
2 be reported?

3 MR. KENNEDY: We've given you all the
4 documents we had. We made that representation to you.
5 You've got all the documents.

6 A If they're not here, they don't exist.

7 Q Did anybody tell you not to prepare written reports
8 regarding any part of the study?

9 A No, sir.

10 Q Did you tell anybody not to prepare written reports
11 regarding any part of the study?

12 A No, I did not.

13 (RECESS)

14 Q Dr. Hemstock, I'd like you to look at a memorandum
15 that was included as part of Exhibit 50. Do you recall
16 ever having seen that before?

17 A No, I do not.

18 Q Dr. Hemstock, there's a reference made in this memo-
19 randum to the identification of chrysotile fibers in
20 talc taken from the Baker mine in Southern Quebec.
21 Do you recall that, learning of that identification?

22 A No, I do not.

23 Q This memorandum states, and I'll read the paragraph
24 that's relevant, "Transmission electron microscopy
25 investigations were undertaken at the Georgia Institute

1 of Technology from February 12 to February 16. One
2 of the samples (79-J-1) investigated during this time
3 was a talc production sample from the Baker mine in
4 Southern Quebec. A request had been made (TSR:J-79-1)
5 to examine the sample and determine the mineralogy and
6 possible contaminants present. A transmission electron
7 microscope examination of this talc production sample
8 showed the presence of chrysotile fibers. The impli-
9 cations prevalent in this information prompted Mr.
10 Howard Shafer to send four more talc production samples
11 to the Georgia Institute of Technology for transmission
12 electron microscopy investigations." Do you have any
13 recollection of Mr. Shafer sending these materials out
14 for examination in response to learning of chrysotile
15 in talc from the Quebec mine?

16 A No, I do not.

17 Q Can you tell me whether or not this event that's stated
18 in this memorandum had any effect or was in any way
19 related to the decision of your department to undertake
20 a study of talc in the Emtal mine in '78 and '79?

21 A I believe it was not.

22 Q You believe that your study was undertaken completely
23 independent of any information that's contained in
24 this memorandum?

25 A I believe so.

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1 Q On what basis do you state that?

2 A On the basis that Mr. Gale was a relatively new em-
3 ployee with the company, and I had not visited the mine
4 and completely apart from any involvement in determi-
5 nations of chrysotile, we were interested in learning
6 more of the Emtal mining and processing operation.

7 Q Now, this memorandum has a stated subject of talc
8 investigation, review and update?

9 A Um-hmm.

10 Q Is that talc investigation the study to which you have
11 referred in your testimony as being conducted in 1978
12 and 1979?

13 A That is Mr. Gale's designation. We did not designate
14 it as a talc investigation.

15 Q Do you know, can you state whether or not this memo-
16 randum was prepared in conjunction with the talc study
17 that you have testified to?

18 MR. KENNEDY: You're talking about the field
19 trip?

20 (OBJECTION BY ALL DEFENSE COUNSEL)

21 MR. PRENTISS: I'm talking about the talc
22 study that Dr. Hemstock has testified took place during
23 1978 and 1979.

24 (OBJECTION BY ALL DEFENSE COUNSEL)

25 A I don't believe the two events are related.

1 Q Which two events?

2 A The investigation of these specific samples and the
3 visit that Mr. Gale and I made to Emtal.

4 Q When did you make the visit with Mr. Gale to the Emtal
5 facility?

6 MR. KENNEDY: Didn't we cover this subject
7 already?

8 MR. PRENTISS: No.

9 A It was in the '78-79 period.

10 Q Over what period of time did this study take place?

11 MR. KENNEDY: What study, the field trip?

12 A Can you be more specific on the study? You're still
13 referring to the visit that Gale and I made and the
14 subsequent analyses? That was only one of many, many
15 TSR type of activities that went on over this long
16 time frame. I don't think it should be highlighted
17 to the degree that you have indicated it.

18 Q Now, there's a memorandum dated March 20, 1979 from
19 Peter Gale to several people including yourself. The
20 subject of that memorandum is talc -- is that talc
21 study or talc investigation?

22 A Talc investigation.

23 Q Do you know what Mr. Gale is referring to as the talc
24 investigation?

25 (OBJECTION BY ALL DEFENSE COUNSEL)

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1 A No, I don't.

2 Q There's a memorandum dated March 23, 1979 from Mr.
3 Triglia to you and Mr. Yunko, and the subject of that
4 memorandum is talc investigation. Do you know what
5 Mr. Triglia is referring to?

6 A No, I do not.

7 Q Here's a memorandum to a Mr. Gale from a Mr. Ojala.
8 Have you ever seen that before?

9 A No, I have not.

10 Q Here's a memorandum dated March 1, 1979 from Mr. Yunko
11 to you, subject, Emtal talc. Do you have any recol-
12 lection of receiving that?

13 A No, I don't.

14 Q And so, Mr. Yunko told you in this memorandum that,
15 "The issue of properly defining Emtal talc mineralogy
16 insists on becoming more complicated all of a sudden."
17 Do you have any idea what he was referring to?

18 (OBJECTION BY ALL DEFENSE COUNSEL)

19 A No, I do not.

20 Q "I am deferring any action until we have an opportunity
21 to review Peter's findings and recommendations. We'll
22 have to decide on a strategy at that time." Do you
23 have any knowledge or recollection of what strategy
24 he's referring to?

25 A No, I do not.

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(OBJECTION BY ALL DEFENSE COUNSEL)

1
2 Q You don't have any recollection what strategy was
3 decided on?

4 A No, I do not.

5 Q Now, I previously showed to you the memorandum dated
6 April 11, 1979 to Mr. Triglia from Mr. Gale and which
7 you received a copy of. The subject is talc investi-
8 gation, review and update. Do you have any idea what
9 talc investigation he's referring to?

10 (OBJECTION BY ALL DEFENSE COUNSEL)

11 A No, I do not.

12 Q The memorandum dated April 4, 1979. It is to you among
13 other people from Mr. Gale, subject: Talc investiga-
14 tion. Do you have any idea what that talc investiga-
15 tion is?

16 (OBJECTION BY ALL DEFENSE COUNSEL)

17 A No, I don't.

18 Q You have no recollection of a talc investigation?

19 A No, I do not.

20 Q These documents, Dr. Hemstock, that you have been ques-
21 tioned on at today's deposition, what proportion did
22 you obtain from the files of the Research and Develop-
23 ment Department?

24 MR. SLOANE: Personally?

25 THE WITNESS: I personally?

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1 MR. PRENTISS: Yes.

2 A I did not obtain any personally.

3 Q Did you direct that any person obtain any of the docu-
4 ments that have been identified in this deposition
5 prior to this deposition at any time?

6 A No, I did not.

7 Q Do you know whether any of these documents that have
8 been identified in this deposition were obtained from
9 the files associated with your department?

10 A I believe that is true.

11 Q How do you know that?

12 A Because I was specifically asked by our legal depart-
13 ment to have an opportunity to look at documents, and
14 my response--my secretary assisted the legal department
15 in generally locating where those files were.

16 Q What did she look under?

17 (OBJECTION BY ALL DEFENSE COUNSEL)

18 A I don't know. She has her own -- she understands the
19 filing.

20 Q Did you give her instructions on how to find these
21 files?

22 A No, I did not.

23 Q Did you discuss it with her at all?

24 A No, I did not.

25 Q None whatsoever?

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1 A No, I did not.

2 Q You're familiar with Mr. Gale. Are you aware that
3 representatives of your company have threatened Mr.
4 Gale with legal action for participating in this law-
5 suit?

6 (OBJECTION BY ALL DEFENSE COUNSEL)

7 A I'm not aware of that.

8 Q Do you know if any person from your company has --

9 MR. KENNEDY: I think a judge suggested it
10 himself from the bench.

11 Q Do you know whether any person from your company has
12 threatened Mr. Gale with any kind of untoward result
13 if he should proceed with participating as an expert
14 in this case?

15 MR. KENNEDY: Objection to the word
16 "untoward."

17 A I have no knowledge.

18 Q You filed an affidavit in a civil action that was
19 filed in the United States District Court in the Dis-
20 trict of Vermont, did you not?

21 A Yes, sir, that's true.

22 Q Do you remember that?

23 A Yes, I do.

24 Q In paragraph five of that affidavit, could you read
25 that?

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1 MR. SARLI: Are you going to mark that as
2 an exhibit?

3 MR. PRENTISS: Yes.

4 THE WITNESS: Do you wish me to read it
5 aloud?

6 Q Do you have that in mind? You've read it?

7 A Yes, I have.

8 Q Do you know what kind of analysis Mr. Gale was going
9 to perform for the Plaintiff in this action?

10 A Are you referring to 1983?

11 Q Well, your statement under oath is, "It is difficult
12 to conceive how Mr. Gale could analyze talc samples
13 taken from the mine and separate in his own mind..."

14 Do you know what kind of analysis Mr. Gale was going
15 to perform on samples taken from the mine?

16 A No, I do not.

17 Q Do you know what kind of analysis he performed on sam-
18 ples taken from the mine during 1978 and 1979?

19 A Generally, I do.

20 Q What are those analyses?

21 A He performed x-ray diffraction analysis. That's pro-
22 bably the only analysis that he himself performed.
23 The electron microscope work would have been performed
24 by someone else with on some occasions Mr. Gale having
25 been present.

1 Q Now, the x-ray diffraction, the output of an x-ray
2 diffraction test is some sort of a graph; is that
3 right?

4 A It's a tracing, yes.

5 Q It's a tracing, a crooked line going across the graph
6 page; is that right?

7 A That's correct.

8 Q Was it your intention to state in this paragraph five
9 of this affidavit that Mr. Gale in looking at the
10 tracing of an x-ray diffraction, that he might perform
11 tomorrow or next week, would refresh his recollection
12 as to a tracing that he saw back in 1978 or 1979?

13 MR. KENNEDY: I'm going to object, and I'm
14 going to instruct the witness not to answer because I
15 think your inquiry now is going to the motion that you
16 have filed. I think the theories behind that are the
17 theories of counsel. It's got no purpose in this
18 deposition whatsoever. So, I'll instruct him not to
19 answer. If you want to get the judge on the phone,
20 I'm sure he's sitting in his chambers right now.

21 MR. PRENTISS: Let me state this for the
22 record. As of this time, this deposition is the con-
23 clusion of the Motion for Contempt because the depo-
24 sition has taken place. All that's left is my appli-
25 cation for fees and expenses. I can state for the

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1 record that I am not pressing any Motion for Contempt
2 to the extent there is still one pending. What I'm
3 stating, there has been filed by Engelhard Corporation,
4 a defendant in a related action, in District Court in
5 Vermont, an affidavit by Dr. Hemstock, and I am per-
6 fectly entitled to cross-examine him on something that
7 he stated under oath which is going to be offered as
8 a part of the defense to that case in Vermont.

9 MR. KENNEDY: But I think if you want to
10 depose him on that, the action -- that you should do
11 it in the Vermont action, not this action.

12 MR. SLOANE: There's a Motion to Dismiss
13 pending in that action. You're seeking discovery in
14 an action in which a Motion to Dismiss is pending.
15 The Motion to Dismiss is made. The argument is that
16 there's no jurisdiction in Vermont. What you're doing,
17 what you just candidly explained, is trying to take
18 discovery in this action where you can't take it in
19 Vermont. That's not proper. You know it.

20 MR. PRENTISS: I can take it in Vermont.

21 MR. KENNEDY: Then take it in Vermont.

22 MR. PRENTISS: This affidavit was also filed
23 in this action.

24 MR. SLOANE: I think the record now is
25 clear on why you're asking these inquiries.

1 MR. KENNEDY: Not only that, the issue --
2 it was filed and it has already been resolved. Here
3 we are, the Court's order.

4 Q One last document. Exhibit 51, Dr. Hemstock, have you
5 ever seen that before?

6 A I have not seen this document before.

7 MR. PRENTISS: No further questions.

8 MR. LEIBENSPERGER: No questions.

9 MR. CURRAN: No questions.

10 MR. DOLAN: No questions.

11 MR. SARLI: No questions.

12 MR. SLOANE: No questions.

13 MR. KENNEDY: No questions.

14 (WHEREUPON, THE DEPOSITION IN THE AFORE-
15 MENTIONED MATTER WAS ADJOURNED AT 5:30 P.M.)
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